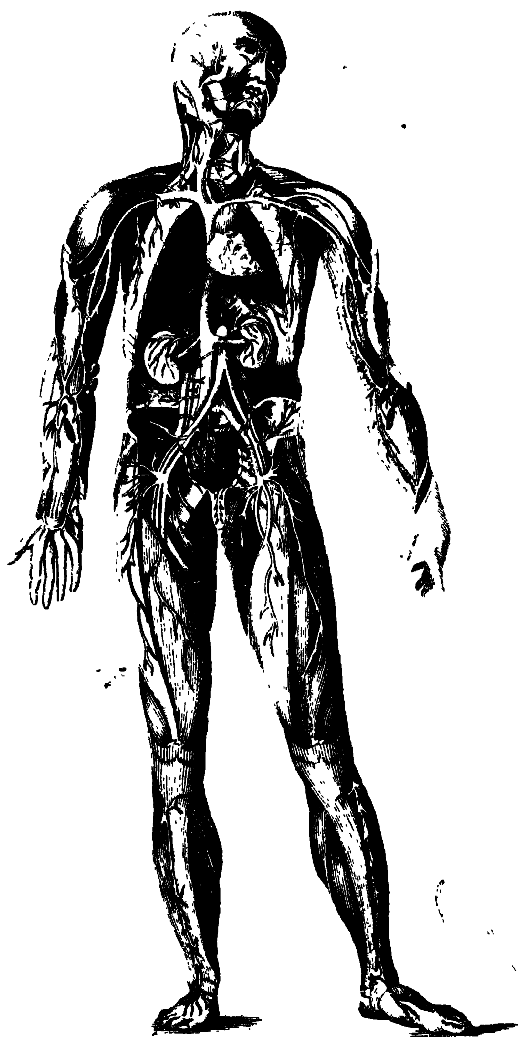
IL P 299 Vol II



THE

EDINBURGH SCHOOL

OF

MEDICINE;

CONTAINING THE

PRELIMINARY OR FUNDAMENTAL BRANCHES

OF

PROFESSIONAL EDUCATION,

VIZ.

ANATOMY, MEDICAL CHEMISTRY, AND BOTANY.

Intended as an

INTRODUCTION TO THE CLINICAL GUIDE.

THE WHOLE FORMING A COMPLETE SYSTEM OF MEDICAL EDUCATION AND PRACTICE ACCORDING TO THE ARRANGEMENT OF THE EDINBURGH SCHOOL.

BY WILLIAM NISBET, M.D.

FELLOW OF THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH, &c.

IN FOUR VOLUMES.

VOL. IV.

LONDON:

Printed for T. N. LONGMAN and O. REES, Paternoster-Row.

1802.

Printed by A. Strahan,
Printers-Street, London.

THE

BOTANICAL GUIDE;

OR, THE

PRINCIPLES

OF

BOTANICAL PHILOSOPHY AND ARRANGEMENT,

COMPRISED UNDER THE HEADS

OF

ANATOMY,
VEGETATION,
CLASSIFICATION, AND
MATERIA MEDICA.

TO

DR. J. C. LETTSOM,

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS
OF LONDON AND EDINBURGH, &c.

EQUALLY DISTINGUISHED
FOR HIS KNOWLEDGE OF BOTANY,
AND HIS
ZEAL FOR ITS IMPROVEMENT;

THIS WORK,
THAT CONTAINS
THE PHILOSOPHY AND PRINCIPLES
OF A SCIENCE
WHICH FORMS THE FOUNDATION OF THE
HEALING ART,
IS ADDRESSED
BY
THE AUTHOR.



PREFACE.

THE ſubject of BOTANY is one which, of late, has become highly popular. To the Phyſician it is of the firſt importance; for, by a knowledge of it, he is enabled to determine, in many caſes, the general qualities of plants by bare inſpection. In the preſent volume it has been the object, along with BOTANY itſelf, to comprize the different ſubjects connected with it. The Anatomy of Vegetables is firſt detailed, in order that the leading parts of the Vegetable Structure may be firſt underſtood. The Principles of Vegetation, as affecting this Structure, and influencing its growth and qualities, are next detailed. The deſcription of the Linnæan Syſtem, and the ſelection of the Termini Botanici by the late Dr. Hope then follows; and, laſt of all, the Materia Medica of the Vegetable Syſtem is pro-

ſecuted on the plan of the Linnæan Arrangement, the generic character being given under the articles. It appeared unneceſſary to deſcend more minutely, or to detail the characters of the ſpecies, which would have rendered this work too prolix, and which its limits would not have admitted.

CONTENTS.

CLASS XIV. DIDYNAMIA.

Order I. Gymnospermia.

Order III. Decandria.

CLASS XVIII. POLYADELPHIA.

Order I. Pentandria.

Order II. Icosandria.

Order III. Polyandria.

Class XIX. Syngenesia.

Order I. Polygamia.

Order II.

THE

HISTORY

OF

BOTANY.

I.

THE origin of Botany, like that of the other ſciences, is obſcure; and the firſt regular traces of it are to be found in the works of Theophraſtus. In detailing its hiſtory from this period, it may be divided into ſeven different æras, illuſtrated by certain progreſſive advances made in the ſubject.

II.

The *firſt*, the Grecian æra, or that of Theophraſtus, marked Botany as a regular ſcience, began to arrange the objects of it into ſeven primary claſſes, and included in theſe claſſes about 500 different plants.

III.

The *ſecond*, or the Roman æra, was little favourable to the advancement of Botanical knowledge. It began with Dioſcorides, who formed only an

arrangement of four claſſes, and deſcribed about 600 plants; and it ended with Pliny the Elder, who deſcribed a great number of plants, to the amount of 1100; but employed no arrangement at all.

IV.

The *third* æra, including the long dark æra of Gothic barbariſm, ſhewed no improvement in the progreſs of this ſcience. Even on the revival of Literature, the Botany of the Antients was merely reſtored without any alteration; and the firſt hint of Syſtematic, or what we may term Scientific, Botany, aroſe with Geſner, and was proſecuted by Ceſalpinus, taking the fruit for the foundation of its arrangement, and dividing the whole into fifteen claſſes.

V.

The *fourth* æra comprehends the period from Ceſalpinus to Moriſon, who improved on his plan, by taking the flower as well as the fruit, and arranging the ſubject into eighteen claſſes. During this period many eminent Botaniſts appeared, who benefited the Science by their deſcriptions more than by any attempts at arrangement.

VI.

The *fifth* æra is, the introduction of a new ſyſtem by Ray, founded on that of Moriſon, and dividing the ſubject into 33 claſſes. But this method, though followed and improved on by many

of the firſt Botaniſts of that period, was ſtill very imperfect in its execution, with a view to facilitate the knowledge of plants.

VII.

From this period, however, the ſyſtems of Claſſification increaſed; and thoſe of Kaunt, Herman, and Boerhaave, are all entitled to a certain degree of praiſe. Rivinus was the firſt who forſook the natural method, and, attaching himſelf to the flower, divided the ſubject into eighteen claſſes. He was followed by Tournefort, who extended them into a greater number; and at laſt the reputation of theſe different attempts became ſunk in that of the celebrated Linnæus.

VIII.

From the publication of Linnæus's method, every other has given place to it; and the explanation of the Sexual Syſtem remains now unſhaken, and the Linnæan Claſſification has been univerſally adopted.

INTRODUCTION.

I.

BOTANY comprehends a knowledge of thofe fubftances which compofe the vegetable kingdom; and this knowledge confifts in an acquaintance with the ftructure of vegetables, the principles of vegetation, and the particular forms or arrangement of bodies, termed their claffification.

II.

This knowlege is chiefly attained by examining attentively the nature of vegetables, as difcovered by their application to the fenfes.

III.

The fenfes employed for this purpofe are;

1. The fight, which, with the affiftance of glaffes, detects their ftructure and the arrangement of their œconomy; and,

2. The tafte and fmell, which difcovers their fenfible qualities.

PART I.

VEGETABLE STRUCTURE.

I.

FROM the application of the firſt, we find the ſtructure of all vegetables to conſiſt of two parts, a ſolid and a fluid.

The ſolids of plants, like thoſe of animals, conſiſt of fibres, adapted to give a proper ſupport to their various parts.

The intermixture of theſe fibres, in various forms, compoſe the membranes, cellular ſubſtance, receptacles, and veſſels.

And thus, again, from the more ſimple parts ariſe the principal diviſions of the vegetable organization, as the trunk, root, and leaves, and the temporary parts connected with fructification.

II.

The Trunk.

The trunk of a tree is compoſed of three different parts, known by the ſeveral appellations of the bark, the wood, and the pith.

III.

The Bark.

The bark is compofed of feveral divifions.

The firft, the epidermis, or cuticle, is the external covering, formed of fibres, which crofs each other in every direction, and is a dry, thin, reticular membrane, pretty tough, and generally fingle, though in many plants different layers in it may be traced. It varies in its ftructure in different parts of the fame vegetable, and confifts of three different parts, as difcovered by the microfcope; which are,

1. Its longitudinal veffels that nourifh the other parts, and have openings into them.

2. The blæ, which confifts of fmall capfules open at top; and,

3. Its interftitial fpaces.

IV.

The ufes of the cuticle are to preferve porous the extreme parts of the plant, to check at the fame time the too fudden evaporation of moifture from it, and to leffen the fenfibility of the more internal parts to the action of the external agents. Hence it is eafily reproduced when deftroyed. In old trees it cracks and decays, and is again formed; and from it alfo we can generally judge of the health of the plant. Its texture is fometimes fo thin, that the direction of the fibres are confpicuous by holding it to the light. The parts below are protected by it from the too great

influence of the atmofphere. When it is regenerated, it adheres more firmly to the cortex, and forms a kind of cicatrix or fcar.

V.

The parenchyma, of a deep green colour, is the fecond divifion of the bark, fituated immediately below the epidermis, foft and fucculent in its texture, and formed by an inter-texture of fibres croffing in every direction. It is univerfally extended over the plant, and even penetrates its innermoft fubftance, though it then changes its appearance. In its natural ftate it is fpongy, and poffeffes every where pores that fecrete a fluid of a watery colour, rendering it full of juice. Its ftructure much refembles the cuticle, though its veffels are larger; and it receives an alteration from the influence of the weather.

VI.

The cortical layers form the next part of the bark. They are compofed of longitudinal fibres or veffels matted in fuch a manner as to refemble a kind of net-work, and each of thefe fibres may be fubdivided into ftill fmaller ones. It is in this part of the plant, as by a tranfverfe fection, we find the vafa propria refide, which fecrete the particular juices for which different plants are diftinguifhed. From this difference of the juice fecreted, the organization of the latter we fuppofe different in different bodies, and alfo in different parts of

the ſame body; though, as far as we can detect, they conſiſt either of a ſimple trunk, or of ſeveral ſmall tubes united into one trunk.

VII.

The chief uſe of the bark is to form the wood; and few trees, therefore, ſurvive the loſs of it in a healthy ſtate. By it, alſo, the functions of perſpiration and abſorption are performed.

VIII.

The importance of theſe two laſt parts are conſpicuous. They appear to be parts very eſſential to the life of the vegetable, for in them the principal functions of life, as nutrition, digeſtion, ſecretion, &c. are performed. This appears in thoſe trees which are hollow within, and in plants which are kept in vigour by the good ſtate of their barks, although rotten internally.

IX.

The Wood.

The bark is connected to the next part, or the *wood*, which differs nothing from it in its ſtructure, but in its farther condenſation; and hence its parts are more difficult to diſtinguiſh. It is divided into two parts, the alburnum and proper wood.

X.

The alburnum is compoſed of a ſoft white ſubſtance, more juicy than the reſt, though not eaſily diſcernible in ſome trees; but in the oak and elm

it is harder and more apparent. It is, in its previous ſtage, imperfect wood, not having acquired its proper degree of conſiſtence, and is ſimilar to cartilages of animals when compared with bone. Thus it is the ſtate between bark and wood, a ſtate the former muſt arrive at before it can become the latter. The hardneſs of the alburnum is proportioned to the vigour of the plant.

XI.

The wood, or lignum, forms by far the greateſt part of the trunk and branches of trees. It is a pact fibrous ſubſtance, diſpoſed into concentric layers, increaſing with the age of the plant, ſurrounding the medulla or pith. It appears to be compoſed of a congeries of dried veſſels, being, in annual and biennial plants, termed the fleſh. But, beſides its longitudinal veſſels and vaſa propria, the firſt of which are ſeen by the cleaving of the wood, and the ſecond in the different coloured woods, as deriving their colour from this ſource, a ſort of cavities or large veſſels appear, having their coats formed in a ſpiral manner, which can be traced in all parts of the plant, except the bark from one extremity to the other, and are found always empty.

XII.

Theſe we conſider as the air veſſels of the plant, in which the air imbibed by the plant, and neceſſary to the vegetable exiſtence, receives a certain

change ſimilar to that taking place in the lungs of animals, and from this change it acts as an internal ſtimulus, promoting the growth of the plant.

XIII.

The uſe of the wood is to give ſolidity to the different parts of the plant, in the ſame manner as the bones afford ſtrength to animals, and in many vegetables a certain degree of this ſolidity depending on its number of woody-ſtrata is required before their fructification can take place.

XIV.

After the wood, the next and more internal part of the plant is the corona, which, though it forms properly a part of the medulla, conſiſts of a ſtratum of cellular matter between the wood and pith, in which the vital principle of the vegetable is ſuppoſed to reſide; and in its ſtructure, on examination, it diſcovers the ſame conſtituent parts as in the other diviſions deſcribed.

XV.

The Pith, or Medulla.

The laſt diviſion of the vegetable body, is into the pith or medulla, which is ſoft, veſicular, and differs from cellular texture by its ſnowy white colour: when dry, it is changed into a brown appearance. In its ſtructure, internally, it is cellular, and is not continued uniformly through the plant, but in many diſcovers interſtices or interceptions, ſo

that its parts are placed as it were in a ſeptum. During the growth of the vegetable while young, it exiſts in greateſt quantity; and, as the woody ſtrata increaſe, it leſſens, and is found often entirely ſhrivelled, and at length diſappears. Thus it forms a neceſſary ſupport to the youth of the plant, but it gradually becomes leſs neceſſary with age; and, perhaps, there is reſerved a ſuperfluous nutriment in the medulla, leſt the young plant becoming dry, it may be abſorbed and converted into aliment, in the ſame way as the fat is occaſionally taken up in animals.

XVI.

Its uſe, therefore, appears to aſſiſt the growth of the plant by ſupplying it with a quantity of juice, and hence its extent is very general, and connected with the degree of rapidity in which the increaſe of the plant proceeds.

XVII.

Branches.

As the branches form a part of the trunk, they agree with it in the ſame ſtructure, and deſerve no particular deſcription.

XVIII.

The Root.

The root of trees, though only a continuation of the trunk, from its ſituation in the earth the parts are rendered leſs conſpicuous. This ſimilarity

of ſtructure is confirmed from this circumſtance; that if the trunk of any tree be torn up, and inverted, ſo that the trunk and branches are put into the ground; then the part, which was originally trunk and branches, becomes root, and the root is converted into trunk and branches.

By the root a foundation or ſupport is afforded to the tree, for by them is it fixed in the earth, and prevented from being torn up by the wind.

Through the ſmaller parts of the root, or the radicles, which are every where given off from the root and its ramifications, is abſorbed a nutritious juice from the earth, for the increaſe, &c. of the vegetable.

XIX.

The Leaves.

The bark gives origin to the leaves of the plant, which are attached to the branches by ſhort foot-ſtalks that iſſue out a number of fibres which ramify, and communicate over the whole leaf. Theſe fibres may be ſeparately obtained by the leaf being kept long moiſt; for every other part, in conſequence of putrefaction, ſeparates, and leaves the fibrous texture alone. Thus a leaf conſiſts of an epidermis, a vaſcular net-work, and a parenchyma full of a greeniſh juice. Their fibres are perhaps improperly called the nerves of the leaf, being merely its veſſels running in every direction, and branching out into innumerable

ſmall threads, interwoven with the parenchyma, like a fine gauze or lace.

The epidermis or cuticle of a leaf, like that of an animal, is plentifully ſupplied with pores, by which both reſpiration and abſorption of various matter, as dew, air, &c. are performed. Theſe pores or orifices differ both in ſhape and magnitude in different plants, and hence the variety of texture apparently peculiar to every plant. The epidermis covers the whole leaf, and contains in it a number of plants.

The arrangement of the parenchyma is into extremely ſmall cells, varying in ſize in the ſame leaf, and which are made up of very minute fibres.

Whatever is the figure of the leaves, they are circumſcribed by the bounding of the other parts by a marginal fibre. The figure of the leaf is determined by the peculiar ſhape of the fibrous part.

By the leaves is the plant nouriſhed. The nutritious juice is reſerved for this purpoſe in their parenchymatous ſubſtance. They alſo expire and inſpire air and water.

XX.

The Flower.

The ultimate purpoſe of all the parts of a plant are directed to its fructification. The particular part connected with this is the flower, on which its generation depends; hence the rudi-

ment or first beginning of the fruit is in the flower, of which it makes a part.

The flower is a temporary appendage of vegetables, like the maternal part of the ovum in the human subject. It terminates the existence of the old vegetable, and it gives origin to the new. It consists of several principal parts, namely, the calyx, corolla, stamina, pistillum, pericarpium, semina, and receptacle; the four first belong properly to the flower, and the three last to the fruit.

1. The outer husk, or cover of the flower, is termed the calyx, empalement, or flower-cup, being the termination of the outer-bark of the plant, which, after having pervaded the trunk and branches, assumes in the flower this particular form, and also attends the fructification. This part is of a firm consistence, and serves to cover and protect the more delicate parts of the flower within. It receives different appellations according to the circumstances with which it is attended. It is smooth within, and sometimes only a temporary part.

2. The corollæ are the next part to the calyx, or leaves of the flower. They are properly the continuation of the inner bark, and attend the fructification in the form of foliage. They are distinguished by their colour, and by being the seat of odor in the plant. Their use is the same as the calyx, serving as a work of defence for the inclosed

parts. Thus the calyx protects the outer, while the corolla protects the inner parts. The leaves, of which the corolla consists, are called petals. They are possessed of more sensibility than the calyx. They receive different names according to their number, form, &c.

3. The next part is the stamina, threads or chives, which are the male part of the flower, designed for the preparation of the pollen, and which consist of the filaments and pistillum. The former is composed of the foot-stalk, and the anthera or button at top, which is generally capsular, and contains the pollen, farina fecundans, or meal, which is fine dust secreted therein, and destined for the impregnation of the germen. Each portion of this meal is by a microscope seen to be concealed in a very fine pellicle (which at the time of impregnation bursts) containing the prolific liquor.

The latter, the pistillum, pistil or pointal, is the female part of the flower, designed for the reception of the pollen, and consists of two parts. The undermost is the vegetable uterus, and when in flower is termed the germen, and when in seed the pericarpium. It differs considerably in its structure in different vegetables, and the seeds are attached to it by small filaments, by means of which they receive nourishment. It differs from the animal uterus in being renewed every time of

fructification. Its under part is termed the ſtyle or ſtigma. The pericarpium of ſeveral vegetables has a conſiderable quantity of a proper juice contained in a parenchymatous ſubſtance, or in veſicles, every where ſupplied with very minute air and ſap veſſels. Theſe are called fruits.

XXI.

The Seed.

The ſemina, or ſeeds, form a deciduous part of the vegetable. In this part the rudiments of a new production, or vegetable, are contained. Hence the ſeed poſſeſſes a vital principle derived from the operation of the pollen, and which it ſtrongly retains for an immenſe length of time.

The ſeeds differ much in their figure and ſize. They are compoſed of three parts, their covers, their lobes, and the embryo plant.

1. The covers are two, the external and the internal. The former are thin and dry, the latter ſpongy and ſucculent. They are both temporary parts, and periſh in the early ſtages of germination.

2. Within the covers are ſituated the cotyledons or lobes, though in many there is only one; and of theſe lobes the nutritious part of the ſeeds is chiefly formed. They ſeem in their uſe to ſerve the ſame purpoſe as the placenta in animals does to the fœtus, conveying nouriſhment to the young plant.

3. The young plant is ſituated between the lobes, and attached to them by ſmall faſciculi of veſſels ſent off from it to each; and, as ſoon as the young plant comes up, we obſerve the leaves different in ſhape and conſiſtence from the others, which are termed the ſeminal ones, and aſſiſt in conveying it nouriſhment.

XXII.

The laſt part of the flower to be noticed is the receptacle, which is the baſe that connects the other parts of it together.

XXIII.

Such is a general view of the chief parts of the vegetable ſtructure, and from this view we are led to conclude that it conſiſts chiefly of fibre, with a cellular tiſſue involving it. In the ſtructure of the tree, theſe parts are formed into a number of remarkable organs. The graſſes differ, as containing a ſmaller proportion of ligneous fibres, and the ſeeds and flowers reſemble the wood and bark.

But in this examination of vegetables, the extent and arrangement of the veſſels, and the various nature of their contents, merit a more particular detail.

XXIV.

Vaſcular Syſtem of Vegetables.

Like the animal, the vegetable ſtructure is highly vaſcular. Its veſſels are diſpoſed in a regular order, and covered by a fibrous delicate

texture. Through them the vegetable is enabled to perform its various functions; and the different changes which its fluids undergo, take place through this secretory medium.

XXV.

The vessels of vegetables are, perhaps, equally varied as those of animals in their form, texture, and uses; hence an arrangement of them has been made by physiologists into five different kinds.

The 1*st* is the succous, which, opening by absorbent mouths or pores, ascend perpendicularly, and carry the nourishment of the vegetable to every part.

The 2*d* is the utriculous, conspicuous on cutting the trunk, situated in the cellular texture, and observing a horizontal direction in their course.

The 3*d* are the few that pervade the medulla, having the same horizontal direction as the former, but insulated and irregular in their situation.

The 4*th* are the proper, which accompany the larger succous ones.

The 5*th* are the spiral ones, which run in a contorted form, are surrounded by the first division, or the succous being placed immediately under the external skin, and serve both for the conveyance of air and nourishment to the plant.

XXVI.

Vascular Contents of Vegetables.

Correspondent to these various divisions of the

veffels, are alfo in fome degree the nature of their contents; for,

1. There appears in every vafcular part a common watery fluid, analagous to the blood of animals, and from which the other parts are feparated; and this watery part is moft abundant in the wood, and circulates both up and down for the nourifhment of the different connected parts.

2. There is found a juice or fecreted fluid proper to each vegetable, feparated from the former particularly by the veffels which occupy a fituation between the bark and alburnum; and this fluid is different both in colour, confiftence, and qualities, in different vegetables.

XXVII.

Such being the general ftructure of the vegetable body, which firft appears in the form of a feed, with a view to underftand the nature of its œconomy, we muft trace the gradual changes which attend its progrefs from this ftate.

XXVIII.

Progrefs of Vegetation.

The firft change of the feed, when favourably placed, is the converfion of one part into a root or radicle, while another part, its plumula, rifes above the earth, and affumes the form of a trunk or ftem. This is the commencement of germination, a procefs which is regulated by different circumftances unconnected with the feed itfelf.

XXIX.

Circumſtances neceſſary to Vegetation.

1. The firſt of theſe circumſtances is the acceſs of moiſture in a certain degree; and this degree is regulated by the nature of the plant. Thus no plant will germinate without moiſture; and germination alſo may be deſtroyed by too much of it.

2. The ſecond circumſtance neceſſary to vegetation, is the degree of temperature; and this is regulated in ſome meaſure by the conſtitution of the plant, for each plant is attached to a particular temperature. Hence their appearance at different times of the ſeaſon; and hence the freezing point, as well as a very high temperature, is equally unfriendly in the greater number of inſtances to this proceſs.

3. The third circumſtance eſſential to the proceſs is the admiſſion of atmoſpheric air, for no plant will grow in the receiver of an air pump; but on farther experiments, the part of the atmoſpheric air moſt friendly to this proceſs, is its portion of oxygen or vital gas.

4. The fourth circumſtance friendly to this change, is the excluſion of light. Thus plants germinate beſt in the ſhade, and thus the ſoil is neceſſary to cover the ſeed.

XXX.

On the feed, the influence of these circumftances are applied to two important purpofes. The firft is;

1. The preparation of the nourifhment of the young plant; and

2. The fecond is the evolution of its feveral parts or organs.

XXXI.

The abforption of moifture naturally gives place as a confequence to the extrication of carbonic acid gas, and this extrication produces a diminution of carbon, and an excefs of hydrogen in the farina of the feed. By the abforption of oxygen at the fame time, and its retention in the cottyledon, the farina of the latter acquires a fweet tafte, or is converted into fugar; and along with this abforption of oxygen, an evolution of heat enfues. The effect of thefe chemical changes proceeds. Veffels next appear in the cottyledons, which pafs to the radicle of the plant, and thus a communication is opened between the vegetating power and the future production.

XXXII.

This communication produces an increafe of the radicle, which finks into the earth and becomes a root, but for long its dependance is placed on the veffels of the cottyledon, and the feparation of them deftroys the farther progrefs of the procefs.

XXXIII.

As the radicle thus increafes, the cottyledons alfo advance in their change. They gradually rife above the ground, being converted into leaves, termed feminal ones; and the plumule, expanding in the fame manner, fhoots forth into branches and leaves, at which point the feminal ones decay, and no part of the cottyledons is longer required. Till, however, the plumule arrives at this perfect ftate, the lofs of the cottyledons is felt, and the vegetation is not entirely deftroyed by the removal of the feminal leaves, yet the future production is much injured in its growth.

XXXIV.

The effect of germination, then, from this view, is the acquifition of life and growth; and this growth, after the completion of the different parts of the plant, gradually extends, being regulated by the nature of the plant, and by the circumftances of the feafon and the foil.

XXXV.

Every feafon, however, difplays an increafe of bulk. New fhoots arife from the roots, the old ones fwell and enlarge. The branches and trunk receive the fame proportional increafe, and thus new matter is conftantly adding, and this addition muft be taken in by the organs of the plant, or drawn from an extraneous fource, as a confequence of its excefs of nourifhment.

XXXVI.

Nourishment of Plants.

From the neceſſity of moiſture to vegetation, from the uſe of rain and dew, and from experiments in the watering of plants, this fluid muſt conſtitute the principal part of the vegetable nouriſhment. This opinion, however, ſo long prevalent, has been invalidated by late experiments; and inſtead of being the proper food, it is rather the means of diffuſing through the plant another principle to which their nouriſhment is more properly referred.

XXXVII.

This principle is their portion of carbon; and during vegetation, all plants receive an increaſe of this matter, which is neceſſary to their perfection and ſemination, and even to the period of their actual vegetation: yet, independent of this, water is ſtill to be regarded as a part of their nouriſhment, and the quantity in which it is proper, is determined by the particular nature of the plant, and by the ſoil in which it is placed.

XXXVIII.

Soils.

All ſoil conſiſts of two parts, a quantity of ſimple earthy particles which gives a foundation to the plant, and ſerves for its ſupport, and of various other matters involved in this ſimple earth, which applied to the vegetable root, are taken up, and

enter into the plant. By the union then of these two parts is ſoil formed.

XXXIX.

In ſoils, a conſiderable difference prevails, according to the proportion of theſe principles preſent in them, and according to the nature of the earthy particles with which they are united. Hence ſoils fall to be conſidered as of various ſpecies, in all of which one or other of the following earths will more or leſs predominate, ſilica, lime, alumina, and magneſia. The firſt conſtitutes a dry ſoil, the third a wet ſoil, and the ſecond and fourth are intermediate ones between theſe two extremes.

XL.

In nature, however, theſe ſoils are not found uniform. One of the firſt noticed is the calcarious ſoil, in which an exceſs of lime prevails. The ſecond is the ſoil produced by the decompoſition of putrid, animal, and vegetable matter. The third is a mixed ſoil, or loam, conſiſting of a modification of the two former, being eſpecially the effect of art and mechanical mixture. The fourth ſoil is clay, diſtinguiſhed for the exceſs of aluminous earth, with a proportion alſo of the calcarious, ſiliceous, and other matters. The fifth are ſandy or gravelly ſoils, which vary in fertility according as the ſand is ſilicious, aluminous, or calcarious, the firſt being the leaſt ſo. The laſt ſoil is the

bituminous, which contains an excefs of oily and carbonic matter.

XLI.

The quantity of rain, however, falling in a country, will much determine the proportion of earths in a foil; and from this difference of foils, the quantity in which water is admitted alfo to the plant through them, as nourifhment, will likewife be various.

XLII.

But, befides water and carbon, plants alfo contain a portion of earth in their compofition. This muft no doubt be drawn in from the foil; and if thus drawn in, earth too muft form a certain portion of their nourifhing principle.

XLIII.

Various other matters are contained in the foil, and thefe matters are alfo found more or lefs as principles of the vegetable body. Soils alfo are found moft prolific from manures, in which thefe matters are moft abundant. Hence fuch matters may form, perhaps, a part of the vegetable nourifhment, and it is from this fource the carbon neceffary to vegetation is derived.

XLIV.

Thefe manures confift of fubftances taken from the vegetable, foffile, or animal kingdoms; and in their ufe particular attention fhould be paid to the nature of the foil requiring their application. The

principal manures employed confift of lime and its carbonate, particularly in the form of marles, with filiceous earths and aluminous clays, and alfo in the form of fea-fhell and wreck. Such manures are highly ufeful to the bituminous foil, and to fome of the clays, and their effect is greateft in the neutralized form, rather than in the ftate of pure lime: for the calcareous foil, the remains of putrid animal and vegetable matter, or dung, is moft fuccefsful.

XLV.

Thus from the analyfis of thefe fubftances, it is probable that oxygen and carbon are the chief principles fupplied by the application of manure to the foil, and that they are drawn from the foil by the vegetable, as conftituting part of its nourifhment and compofition. That the carbon is decompofed alfo by the iron conftantly prefent in every foil, and that by this decompofition it is rendered fit for the purpofes of the vegetable.

XLVI.

As the nourifhment of plants, or the means of their increafe, is clearly derived from the foil, that part of them next to the foil, or the root, muft form the medium of conveying it. In examining this part of their ftructure, no fenfible openings appear. The naked eye traces no paffage for its reception; hence it muft undergo a ftate of extreme fluidity or folution before it can be received

into them, and the vegetable food, therefore, can only be of a very fluid nature.

XLVII.

The extremities of the radicles appear alſo the part moſt active in receiving this nouriſhing ſupply, and the ſoil is therefore much exhauſted where theſe radicles are moſt extenſively ſpread. The amputation of a radicle ſtops its growth. Its extremity is never renewed, ſhoots ariſe from its ſides to ſupply the deficiency, or a new root is entirely formed.

XLVIII.

As the food of vegetables is required in a ſtate entirely fluid, ſo all the matters of which it is compoſed are capable of undergoing this ſolution. The food then abſorbed by the roots is received into the vegetable body in a fluid ſtate, and when received, it is diſtributed through the plant, to aſſume certain changes from the action of the other parts of the plant.

XLIX.

This food or juice aſcending conſtantly from the roots, has been termed, as already noticed, the ſap, lymph, or blood of the plant. It is moſt abundant during the ſpring; and by inciſion of the bark and part of the wood, it is made to iſſue out, or the plant is ſaid to bleed.

L.

At different periods of the feafon this fap, or blood of the plant, is found in very different ftates. The compofition of this fap has employed the experiments of chemiftry, and it has been found to confift of various proportions of water and volatile matter, which is moft abundant; of acetite of potafh, of vegetable matter, and of carbonate of lime. Of thefe feveral ingredients, the increafe of the vegetable matter is gradually confpicuous as the feafon advances, while the faline principles diminifh in the fame proportion. Hence the faline ingredients are derived probably from the foil and fome part of the food, while the vegetable matter is elaborated by the organs of the plant. At the fame time, though thefe faline matters are derived from the foil, they may acquire fome change on their abforption by the roots, or on entering the general circulation of the plant, fimilar to what the blood receives when it is poured into the general circulation in animals.

LI.

The fap received into the roots afcends the vegetable circulation with force, and iffues from the injured part during the bleeding feafon fo ftrongly, as to fupport a mercurial column of 32 inches. In its progrefs it is carried to the fummit of the tree, and its paffage has been marked by

various experiments with coloured liquors afcertaining this fact.

LII.

The feat of circulation is found alfo to be the wood, not the bark. Hence, though ftripped of the bark, the tree continues to grow; and hence the bleeding of the fap is inconfiderable, unlefs the incifion is carried into the wood.

LIII.

This fap is conducted through the veffels or tracheæ confpicuous in the wood, which have been already noticed, and which appear, at leaft the larger ones, always empty on cutting the wood; and to judge of them, they fhould be infpected the inftant the incifion of them is made.

LIV.

The power by which the fap is conducted through the veffels, depends evidently on their own principle of irritability. It neither depends on the lightnefs of the fluid, on the action of the air on the veffels, on the exiftence of valves, on fermentation, nor yet on capillary attraction, for to all thefe different principles numerous objections may be offered. The facts which fupport the irritability of the vegetable fibre are well eftablifhed. Many plants are known to move on the application of a ftimulus to them. Flowers are found to expand with the fun, and to clofe at night. Experiments fhew the actual contraction

of the veſſels by the diſcharge of their contents, and vegetation is promoted by the addition of certain ſtimuli. Thus the mouths of the veſſels receive their ſap, and by their contraction propel it upwards, till, from the extremity of the roots it reaches the ſummit of the plant.

LV.

But, in the vegetable ſyſtem, beſides the ſap, another fluid was noticed, or the peculiar juice, the ſuccus proprius of the vegetable. This fluid is conſiderably different in different vegetable bodies. It is clearly a ſecretion from the ſap, or the latter altered by a peculiar proceſs. Its abſorption is from the leaves towards the roots, which an inciſion of the plant diſcovers, by its greateſt flow being this way, and by a ligature producing a ſwelling above, and not below.

LVI.

The veſſels from which it flows are found in every part. Their ſtructure agrees with the tracheæ. The peculiarity of this fluid is diſtinguiſhed by its colour and conſiſtence, appearing green, red, milky, &c.; and its progreſs in its veſſels depends on the ſame principle as that of the former fluid, or the ſap.

LVII.

Thus, while the ſap aſcends, and is directed to the leaves, it is there changed to fit it on its de-

ſcent for forming the peculiar ſecretions that go on and form the peculiar vegetable juices.

LVIII.

The changes the ſap acquires in the leaves are difficult to trace; but on arriving there, part of it evaporates, or is thrown off. Nor is this an inconſiderable parr, for ſome plants are known to diſcharge daily equal to half their weight. The extent of this diſcharge correſponds in ſome degree to the ſurface of the leaves, and the removal of the leaves terminates the tranſpiration. It is regulated alſo by the degree of heat, and only takes place during the day. Hence ſunſhine promotes it, and rain and froſt counteract it; and even the quantity of ſap abſorbed depends on the proportion of this diſcharge.

LIX.

The nature of this follicular diſcharge is not fully determined. The leaves are the only organs by which it takes place, and of theſe the upper ſurfaces are the part of the organ on which it depends. Thus the varniſhing, or otherwiſe coating this part, entirely prevents tranſpiration; and the leaves themſelves, gradually in the progreſs of the ſeaſon, become leſs fit for this peculiar office.

LX.

As tranſpiration takes place only by the leaves, and theſe are for the moſt part annually renewed, It appears only a temporary function; and even

where the leaves are retained, as in ever-greens, the diſcharge is proportionally leſs than in other caſes.

LXI.

But, as well as emitting a diſcharge from the plant, the leaves alſo are capable of abſorption from the atmoſphere, and in this way is carbonic acid gas introduced into the plant. This fluid is eſſentially neceſſary to vegetation. It is both found in the plant, and emitted from it, and alſo abſorbed by the leaves, and introduced anew. The quantity in which it is neceſſary, has not yet been fully determined. By means of it the oxygen of the plant is diſcharged, and the carbonic baſe fixed in it as a conſtituent principle.

LXII.

In order to this decompoſition taking place, light is eſſentially neceſſary; hence it only occurs in the day time, and the quantity of carbon entering a plant depends much on its growing in the light; for, when confined to a dark ſituation, the proportion it acquires is very ſmall. Along with the acceſs of light, a ſomething derived from the ſoil, and imparted to the ſap, is alſo neceſſary to complete the due quantity of carbonization.

LXIII.

Thus a conſiderable quantity of carbonic gas is required for the health of plants; but the proportion of it, and the quantity of oxygen emitted,

have not been aſcertained. Reaſoning, however, from analogy, it may be ſuppoſed the quantity of oxygen thus given out ſhould correſpond in plants with the proportion of carbonic acid gas diſcharged by animals, and thus a natural balance of theſe principles will be preſerved, ſo as to admit the proceſſes of animal and vegetable life to be properly conducted.

LXIV.

In the parenchyma of the leaves, the decompoſition of theſe principles is ſuppoſed to proceed. That it is connected with a regular organization is aſcertained; for the deſtruction of the follicular organization deſtroys it.

LXV.

Thus the ſap abſorbed by the roots and leaves is in part diſcharged by the latter, and its remainder changed by the addition of carbon. But, as well as carbonic gas, oxygen is alſo abſorbed by the leaves, and ſeems neceſſary to the proceſs of vegetation. Hence the neceſſity for the preſence of atmoſpheric air to the growth of plants, the abſorption of which it is moſt probable occurs in the night.

LXVI.

With oxygen, water alſo forms a part of vegetable abſorption. In the form of rain and dew it deſcends on the leaves, and gives them vigor and animation. Hence a moiſt atmoſphere is moſt

favourable to vegetable growth; and in defcending into the particulars of the abforption, the under part of the leaf feems more immediately appropriated to it, while the upper part forms the transfpiration.

LXVII.

From thefe circumftances, various parts of the leaf are adapted to various purpofes; and a conclufion is alfo to be farther drawn, that the abforption of the various matters that take place into the vegetable fyftem is confined chiefly to the night, while their decompofition again is an operation chiefly conducted during the light.

LXVIII.

In this manner are performed the varied operations of the vegetable fyftem at different times. Water and oxygen are emitted by day, and carbonic gas is abforbed; while moifture and oxygen are abforbed by night, and carbonic gas is given out. This emiffion of carbonic gas arifes from the decompofition of water, and is regulated by the quantity of oxygen abforbed.

LXIX.

The decompofitions which arife in the œconomy of the plant, it is impoffile with accuracy to afcertain. It is clear, that during the day the carbon of the fap is increafed, while, during the night, the hydrogen and oxygen are accumulated. The after combinations, detailed under the head of

Chemiſtry, in the manner of their formation elude our reſearch.

LXX.

The real quantity of oxygen emitted, and carbonic gas abſorbed, is alſo difficult to eſtabliſh; for experiments ſhew, both that an accumulation of carbon is conſtantly taking place in the plant, and alſo that the emiſſion of oxygen from it is greater than from calculation is imagined.

LXXI.

Beſides theſe purpoſes anſwered by the action of light on the plant, others remain of a different nature, particularly its effect on their colour. Light communicates a green colour to the vegetable fibre, darkneſs renders it white. In order to this effect, though we cannot explain the cauſe, the preſence of oxygen, as well as light, ſeems neceſſary; and wherever the atmoſphere is loaded with hydrogen gas, this greenneſs is increaſed.

LXXII.

In this general view of the vegetable ſtructure, the leaves appear to ſerve the moſt important offices. By them the nouriſhment is in part conveyed, and through them the carbonization of the ſap in the ſame manner as by the lungs the oxidation of the blood of animals takes place.

LXXIII.

Hence the loſs of the leaves is to the plant the loſs of its vegetating powers, and new leaves muſt

be produced before vegetation can proceed. This is confpicuous in the plant from the period of its firft germination, and the removal of the dead leaves is the fufpenfion of its growth.

LXXIV.

The formation of leaves is even marked long before their appearance. They are traced in the bud, and require only evolution, or that the plant fhould barely poffefs fo much nourifhment within itfelf till this evolution is effected, and its new parts, or leaves, are complete: but, if the plant fhould be deprived both of leaves and buds, its vegetation is then at a ftand, and cannot proceed.

LXXV.

From the leaves, then, where the changes detailed are performed that conftitute the peculiar juice, the latter is carried by veffels to every part, and the various intentions of vegetation are thus executed by the increafe of the wood, bark, and roots, by the preparation of feeds, and by the accumulation of nourifhment in the buds, fo that the future purpofes of the œconomy may be anfwered.

LXXVI.

This peculiar juice muft from its nature differ in different vegetables; and their leaves, therefore, though their mode of action is the fame, from peculiarities of combination, muft furnifh different products. But, whatever fpecific differ-

ence may take place in theſe products, one principle muſt always be preſent in the peculiar juice, the baſe of the wood or vegetable fibre, in the ſame manner as the animal blood contains the fibrine, or baſe of the muſcular fibre. This is even eſtabliſhed by experiment, and by applying chemical agents to the peculiar juice; for a depoſition takes place from the juice of a matter ſimilar to the woody fibre. Compared then with the ſap, the peculiar juice contains an exceſs of carbon, hydrogen, and oxygen, with a deficiency of water and lime; and in conſequence of its being conveyed to every part, the different functions of the plant are performed, though the manner in which theſe take place is involved in obſcurity.

LXXVII.

Particular Economy of Vegetables.

Having thus taken a connected view of the progreſs of vegetation, we are now prepared for examining the vegetable œconomy more in detail. The connection between the animal and vegetable ſyſtem is ſtrongly marked, and the ſeveral functions connected with nutrition and increaſe, admit a near compariſon.

LXXVIII.

Vegetable Abſorption.

The firſt of the functions is the abſorption of nutriment. Vegetable abſorption differs from the animal in only taking place by the ſurface, and

confequently in being lefs complex. The furface has, for this purpofe, we have feen, two fets of abforbents, the pores or mouths on the radicles of the roots, and thofe on the furface of the leaves.

LXXIX.

The root imbibes the nutriment from the foil, by means of its abforbent pores, as long as it continues in a fucculent ftate; when this changes, it lofes its powers, and fhoots are fent out to continue the abforption, and convey it, firft to the root, and thence to the whole plant. Thus the fuccefs of tranfplanting depends on the number of thefe radicles prefent.

LXXX.

The leaves alfo, we have feen, are an organ equally important as the root; they abforb a variety of matters from the atmofphere with equal power, as the radicles do from the foil, and convey them to every part of the plant. Thus the plant drooping in the folar heat, is revived by the dew of night, tranfmitted to every part of it through the leaves.

LXXXI.

Thus an obftruction of the leaves, by fhutting their abforbent mouths, produces difeafe and change of colour; and the removal of this part even fufpends vegetation. Thus, alfo, where the root of the plant is fmall for affording nourifhment, its leaves proportionally expand.

LXXXII.

This is confpicuous in the cacti and feda, which, although they have very fmall roots in proportion to their fize, and grow on the drieft hills, are very fucculent.

LXXXIII.

The variety of matters which the leaves tranf-mit, were already confidered.

LXXXIV.

The firft to be reviewed is water, which, through this medium, is diffufed through every part of the plant, and conftitutes a portion, as already noticed, of its aliment. Under the want of this univerfal fluid, the plant droops and dies; by its influence it is not only nourifhed, and its vafcular fyftem dilated, but it contributes greatly to ftimulate and augment the vital power of the veffels. Water was confidered formerly as the fole food of plants, and the proof of it was drawn from the circumftance that plants placed in water alone will grow without any other nourifhment. There occurs, alfo, frequent inftances of fprings being dried up from their neighbourhood to a wood, which could only depend on this caufe.

LXXXV.

The fecond matter abforbed through the medium of the leaves is atmofpheric air. Thus air, befides being a neceffary ftimulus applied externally to the plant, enters alfo largely into its compofi-tion, in fo much fo, that fome vegetables poffefs a

quantity of it equal to a third of their weight. The quantity of it, however, neceffary to different vegetables, is various; and hence we find that thofe which grow on a mountainous fituation, and are much expofed to it, perifh foon when brought down to a plain.

LXXXVI.

Thus, alfo, plants *in vacuo* cannot be evolved from the feed, nor can vegetation afterwards proceed. To the fame principle may, perhaps, be referred, that feeds buried too deep in the foil, do not vegetate, but die.

LXXXVII.

But in this abforption of atmofpheric air, we muft examine the particular ingredients of it which are fo neceffary to the plant. Two principles we find contained in this fluid; and thefe two principles, we already noticed, as effential to vegetation.

LXXXVIII.

The firft is vital air, which we find both abforbed and given out by the plant. Thus plants placed in this fluid alone grow larger, become more powerful, and are greener than in atmofpheric air.

LXXXIX.

No air then, when deprived of oxygen, is fit for vegetation alone; and plants placed in azotic or mephitic air, carbonic or fixed air, hydrogen or inflammable air, become flaccid, and gradually

die. Nitrous air has the ſame effect on them in a ſhort time. Hence vital air imparts a natural ſtimulus neceſſary to excite the fibres, and ſupport the vital energy of the vaſcular ſyſtem.

XC.

The next matter abſorbed, we noticed as abſolutely neceſſary to the vegetation of the plant, is carbonic acid gas, a matter in order to convey to it the conſtituent baſe of its fibre, and its other predominant principles.

XCI.

The matter of heat, or caloric, from the ſurrounding atmoſphere, is another ſubſtance eſſentially neceſſary to the ſucceſs of vegetation, and which is abſorbed by the plant. The neceſſity for it is ſufficiently demonſtrated by the appearance which plants at peculiar times of the ſeaſon aſſume, and by the difference which vegetables diſplay in different climates. The degree of it alſo requiſite for the growth of individuals in the ſame climate, is conſiderably varied, and forms what may be ſtyled the difference of vegetable temperament; and it is this difference which has given occaſion to the ſeveral modes of its artificial application, by the conſtruction of hot-beds, green-houſes, &c. From the ſame cauſe the ſhades of trees are ſo cool. Tepid ſhowers, by which they obtain water, together with this principle, is moſt favourable to their growth. Even in the ſtate of

ſeed this matter is required, for ſeeds do not vegetate in the cold.

XCII.

Light is another matter, we obſerved, of great importance to vegetation in reſpect to their colour. Night and a dark ſituation renders their appearance paler, and deſtroys their vigour; but by the influence of the day, they become ſtrong and coloured. Thus the endive, artificially tied up, grows white internally, and green externally; the aſparagus, covered with ſoil, becomes tender and white, and its increaſe ſeems but ſlow; while, if expoſed, it on the contrary ſoon expands, becomes firm, and acquires a greenneſs of colour.

XCIII.

The laſt cauſe of vegetation is the electric fluid, which is always preſent in the atmoſphere, and ſilently conducted from it by the attraction of vegetables. Hence we find a number of vegetables that grow beſt in warm moiſt weather, when it is moſt abundant; and its artificial application has been alſo experienced to promote conſiderably their growth.

XCIV.

Thus the food of plants is more varied than it was once ſuppoſed; and though water and air form their principal nouriſhment, yet many other matters are blended with them, that deſerve the firſt attention in their œconomy.

XCV.

Abſorption, then, is the mode by which the nutriment of vegetables is received into their ſyſtem, and when abſorbed, it is next converted or aſſimilated into alimentary matter.

XCVI.

The principles of vegetable nouriſhment, when analyſed, are ſimilar to thoſe of animals. In the animal, a particular organ decompoſes them after their reception into the body. In the vegetable, they receive a previous preparation in the ſoil, which fits them for immediate application. Thus Nature performs herſelf the preparatory taſk, by the putrefaction of the various inorganic ſubſtances the elementary principles of the vegetable nouriſhment are diſengaged and attracted by the mouths of the abſorbent radicles. Vegetables then, like animals, are nouriſhed by a ſimilar proceſs, the veſſels for which in the former are ſituated externally, but in the latter they are placed internally in the inteſtines.

XCVII.

By the activity of the vegetable organs, the aliment is next converted into a peculiar fluid, under the name of ſap, (totally different in its nature from what it was before its abſorption,) and which acquires, as a part of the change, the poſſeſſion of the vital principle. Thus animation

being given to the alimentary fluid, univerfally diftributed, it ferves for the nutrition, developement, and reproduction of vegetable fubftances, and anfwers every purpofe of the animal blood. By its intimate penetration into every part of the plant, nutrition is conveyed, and their gradual extenfion and increafe is an effect of the application of the fame means.

XCVIII.

Thus the abforption taking place from the vafcular extremity, or pores, conveys the already prepared fluid or chyme into the fuccous veffels, formerly noticed, into which they open; and thence, by the tracheæ or fpiral ones, it reaches the parenchyma of the leaves. There it is changed into a different juice, and the vital principle added to it, thus vegetalized, it is carried to all the parts of the fructification by the circulation of proper veffels, and by the fame power depofited for the formation of the folid, and the various fecretions of the fluid parts.

XCIX.

In this manner is conducted the nourifhment of the plant, its veffels elongated, and its whole fabric increafed; and the fame vegetative principle which generates it in the feed, continues its nutrition in the various ftages of its increafe while its life continues.

C.

The leaves of plants being thus ſupplied with parenchyma, which is the receptacle for the nutritious juice, may with propriety be conſidered as analogous to the adipoſe paniculus of animal bodies.

CI.

With the ripened fruit of plants, the ſtages of nutrition and increaſe ceaſe, and the vaſcular ſyſtem hitherto active, gradually becomes ligneous and impervious.

CII.

Vegetable Growth.

The courſe of vegetable growth is a ſubject beyond our reſearch. Its progreſs we are only able to trace. The evolution of the ſeed was formerly examined, and the ſtages from the period of its formation into the plant, now claim our attention.

CIII.

This growth does not obſerve, in every plant, the ſame progreſs; for in the root, at firſt, it advances more rapidly than in the ſtem; and an oak plant one foot and a half high, has a root four feet in length, in order that by ſhooting out it may ſuck in ſufficient nouriſhment. If the principal root be mutilated, the plant emits radicles in every direction; which always grow faſter than if the root had remained perfect. The radicles

at firſt do not receive any conſiderable increaſe; but ſoon after augment into a body almoſt equal to the principal root; and then, when too hard for abſorption, they protrude new lateral radicles.

CIV.

The extreme apex of the roots is the point of prolongation, and this appears if any root be coloured with varniſh in different places. The radicles, alſo, chooſe always the moſt humid part of the ſoil, ſo that walls are frequently overturned by the power of the roots penetrating towards moiſt places. Thus the growth of the roots takes place, while the other parts of the plant are yet dormant; and hence a difference in the temperature of the root from the other parts prevails.

CV.

The trunk of vegetables is expanded throughout its whole length; and not, like the root, at the apex only, but its growth is leſs quick than that of the root. Thus, if the tender ſtem of a plant at the beginning of ſpring be coloured over with varniſh, and marked in different places, the marks will, after a few months, be obſerved to have receded. In ſome caſes, however, where the fibres are ſoft and ſucculent, the growth here is alſo performed by elongation, though in the greater number an additional matter is ſupplied.

CVI.

In annual plants, the higheſt expanſion of the ſtem continues until the unfolding of the flowers: then the fibres of the ſtalk indurating, at length gradually become dry.

CVII.

In perennial plants, the ſtem continues to increaſe until the fall of the leaves in autumn. In the mean time, a germ or bud appears in the apex, containing the rudiment of the new ſtem, which during winter increaſes ſlowly until the following ſpring. On caſting off its winter covering, at this period it continues the increaſe of the ſtem in the ſame manner as the inferior part increaſed during the former years; for from the place where a bud is ſeated a tumour extends, which being continued with the new ſtem, ſcarcely leaves any veſtige.

CVIII.

The ſtems of vegetables increaſe alſo by additional ſtrata in breadth as well as in length, and theſe are formed by the bark, which, ſimilar to the perioſteum in animals, penetrates the bone, or conveys the generating matter. Thus additional ſtrata are annually depoſited by the veſſels of the bark, as experiments confirm: for, if the cortical ring be torn from the trunk of a tree, and the woody cylinder of the denuded part be perfectly ſurrounded with a tin leaf; and the whole after being replaced, is covered with the tree plaſter; then,

upon cutting the tree fome years after, it will be found that no increafe takes place in the part covered with tin, and that it remains as when firft applied. Thefe ligneous ftrata are the production, as formerly ftated, of the bark; for, if metallic threads be inferted obliquely into the cortex, they are after a length of time obferved in the wood itfelf, and not in the bark.

CIX.

In this way does the increafe of vegetables proceed, and the rapidity with which it takes place in individuals is confiderably varied, hence the different fize of vegetables both in height and breadth at the fame age. This is particularly the cafe with trees, for their trunk receives two ligneous ftrata annually; but the thicknefs of thefe ftrata varies every year, being greateft when the tree is of a middle age, and the warmer the fummer, the more flender the bark. It is from thefe annual ftrata of trees that an attempt has been made to afcertain their age, and in many this is no doubt to be done from the appearance of the annual circle, but in others it can only be accomplifhed by obfervations of the quantity of growth in a given time. The bark has been confidered as a protrufion from the veffels of the wood.

CX.

The generation of branches appears to be from the corona, or that divifion fituated between the

wood and medulla, from whence they proceed. A germ, alſo, or bud, produces a new branch, and hence gives birth to a new plant concealed in it; for the branch contains every part eſſentially neceſſary to form a new plant, as is evident from cutting it off and planting it, by which a complete tree is produced.

As the veſſels principally protrude where there is the leaſt reſiſtance in the bark, the ſame is obſerved of the branches of the root.

CXI

The veſſels of the bark give origin alſo to the leaves; for, the bark being ſeparated from the wood, no connection of the leaves with the wood can be obſerved; and the bark alone, if put into water, produces leaves.

CXII.

In the production of flowers, the epidermis enters the calyx, the alburnum the corolla, and the ſeries of veſſels into the ſtamina and piſtils.

CXIII.

The Secretion of Vegetables.

As the animal ſecretions ariſe from the blood, ſo the ſame takes place from the ſap of the vegetable, the nouriſhment diſtributed to every part is partly applied to the ſolid parts, is depoſited in peculiar ſecretory veſſels, in particular receptacles, or on particular organs; and the uſeleſs or ſuperfluous part, is diſcharged by tranſpiration through

the leaves; or is, perhaps, partially carried off by the roots.

CXIV.

As theſe various fluids exiſt in particular parts of the vegetable, and no where elſe, ſo by the power of theſe parts alone muſt they be produced, and by the action of the veſſels there, the ſap ſeems to be decompoſed into their principles, and theſe, at length, form new unions, and compoſe new productions.

CXV.

Vegetable Tranſpiration.

Plants, we have ſeen, poſſeſs a diſcharge ſimilar to the perſpiration of animals; and this perſpiration is divided, like it, into the inſenſible and ſenſible. The inſenſible perſpiration is chiefly performed by the leaves; and hence it only takes place while the leaves exiſt, and in the evergreens, where they always continue, the perſpiration on this account is found, by experiments, conſiderably ſmaller than in the others. The matter perſpired, was already examined; and even the air along with it, though from a poiſonous plant, is pure. The quantity varies much in different bodies, and is greatly influenced by external circumſtances. For it is moſt conſpicuous in the day-time, is moſt abundant in dry weather; and hence, alſo, dry plants perſpire always moſt, and are much affected by the ſtate of heat and light.

The purpofes of this perfpiration to the plant we conceive to be the fame with the different excretions which take place from the animal body. This is proved by the diminifhed weight of plants in the day; and, by placing a glafs bell over fome mowed grafs in a field, although the feafon be very warm and dry, in two minutes the internal furface of the glafs will be covered with a great number of aqueous drops.

CXVI.

That tranfpiration is chiefly carried on by the leaves, is confirmed from feveral experiments, from the confideration of their porofity, and from trees wanting leaves fuffering no alteration of weight.

CXVII.

The fenfible perfpiration is generally partial. It confifts of an odoriferous exudation in certain bodies, and is perceptible both to the touch and fmell. It is not conftant, like the former, but is emitted at different times from different plants.

CXVIII.

Thus the leaves are the principal organs of perfpiration, and this difcharge by day exceeds that by night; for, in the night, inhalation is the general office of the leaves; hence heat and drynefs are neceffary to this difcharge; and when a dew falls it almoft wholly ceafes.

CXIX.

The quantity of perſpired matter in the day varies in different plants, and in ſome ſpecies it is very conſiderable. Thus a ſunflower in the midſt of ſummer is found to perſpire, on an average, upwards of a pound a day; and this diſcharge is greateſt in the flowering ſtate.

CXX.

Even a ſingle leaf is found in twenty-four hours to perſpire ten grains; a tree with 20,000 leaves muſt perſpire, within a day, one pound; and on the ſame calculation, an acre of a field containing 30,240 ſquare feet, with plants ſo diſpoſed, that a foot diſtance is placed between them, would ſoon become a lake of water, if every plant perſpires eighteen ounces, were this fluid not carried off.

CXXI.

Such a portion of moiſture, then, muſt be ſupplied from the ſoil accumulating it as a reſervoir at different periods of the ſeaſon, as well as in ſummer.

CXXII.

The general facts in regard to vegetable perſpiration may be thus collected:

1. That it is particularly promoted by the heat of the ſun, and by the expoſure of the plant ſo as to increaſe it, it ſoon acquires a mature or ripened ſtate.

2. That this difcharge is checked by cold and moifture; hence warmth and drynefs are moft favourable to growth.

3. In the ftate of health, vegetable perfpiration is ftrongeft; hence weak plants are injured by increafing their moifture.

4. An equal perfpiration, proportioned to the aliment abforbed, conftitutes the health of a plant; excefs or deficiency of this difcharge is equally injurious.

CXXIII.

The general ufe of vegetable tranfpiration is to free the plant of its hurtful and fuperfluous parts; and this it does in the manner already pointed out in a former divifion.

From confidering the tranfpiration or difcharge from the leaves of plants, we are next led to review another function of the vegetable fyftem.

CXXIV.

Vegetable Refpiration.

This is the vegetable refpiration, and it is a function equally neceffary to plants as to animals. A proof of this is drawn from the changes they produce on the furrounding air. This function, we formerly noticed, is performed by the leaves, which are not improperly called the lungs of plants.

CXXV.

By them is continually inſpired from the atmoſphere, diſſolved in a watery fluid or dew, mephytic and carbonic air, eſpecially during the night time; by which the tranſpiration of the aqueous vapour is diminiſhed; and the ſame principles which the leaves thus ſuck from the atmoſphere, are alſo derived by the roots from the ground.

CXXVI.

A conſiderable variety, however, in the matter of expiration takes place in different vegetables; and the air expired differs not only in different plants, but alſo in different parts of the ſame plant, depending upon the time of the day, the place, and a variety of other circumſtances. Thus the leaves and green parts of plants, in the day-light expire pure vital air; which is proved by putting a plant into a glaſs veſſel, filled with water, expoſed to the ſun's rays. A number of air bladders ſoon occupy the ſurface of the leaves, and at length riſe to the top of the veſſel; where being collected, they afford a reſpirable element to animals, and candles burn in it very brilliantly. But if the ſame experiment is made with the ſame leaves, in the ſhade, or by night, the air then obtained extinguiſhes flame, and ſuffocates animals, being fixed air with a little azote.

CXXVII.

The coloured parts of plants, as well as the

root, bark, wood, flowers, fruits, and feeds, under certain circumftances expofed to the rays of the fun, expire only carbonic air.

CXXVIII.

Many plants, alfo, efpecially of the fungous kind, expire inflammable air; for if fhut up in a veffel containing vital air, it becomes from their expiration fo vitiated as to be lighted by a candle.

CXXIX.

If plants be put into inflammable air, and expofed to the rays of the fun, they emit pure vital air as long as they vegetate.

CXXX.

Hence light and heat, and inflammable air, act as ftimuli on plants; and draw from them pure vital air. Simple heat, however, does not feem to contribute any thing, for the evolution of vital air is more powerful in cold than in heat.

CXXXI.

The parts of plants expiring no vital air exhibit a white and varied colour; and the fame is confpicuous in a dead or difeafed plant.

CXXXII.

Thus by vegetable infpiration is inhaled a nutritious vapour; and by expiration, fuperfluous or noxious ones, that might prove the fource of irritation are thrown out; and for this purpofe is vegetable refpiration eftablifhed.

CXXXIII.

The Motion of the Fluids in the Veſſels.

The circulation of plants, we formerly deſcribed, as taking place in both directions, upwards and downwards, or from the root in the one caſe riſing perpendicularly, and from the leaves in the other paſſing down into the ſtem. There is here no centre from which a circulation begins, as in the animal ſyſtem, and to which its return is regularly made; but ſtill in the fluids of plants a regular courſe is obſerved; and this variety of their motions takes place at different times, for the fluids attracted by the leaves deſcend at night, and thoſe by the root aſcend by day. Thus the leaves by night inhale dew, and ſeldom perſpire vapour; and *vice verſâ.*

CXXXIV.

The proof of the aſcenſion of the ſap is drawn from ſeveral circumſtances, as the erection of flaccid plants, if water be poured on the ground, or if the root only be put into water.

CXXXV.

The artificial colouring of flowers is a proof of the ſame; for, by impregnating the water abſorbed by the root with a colouring matter, it is found to aſcend; but the return of this fluid, or its deſcent, has not been traced ſo as to render the oppoſite motions complete to demonſtration.

CXXXVI.

From their mode of circulation, the veſſels of plants muſt poſſeſs a vital energy, and an irritability of fibre, ſo as to be affected in their diameter by various ſtimuli, the ſame as thoſe of animals. This is clear, both from the aſcent of the contained fluid, and from the influence of ſuch ſtimuli upon them. It is by this action of the veſſels the very rapid circulation of the ſap in them is accumulated, for the degree of motion indeed varies in every plant, regulated by the proportion of their irritability, and thus it is quickeſt in thoſe plants which are the moſt irritable, and *vice verſâ.*

CXXXVII.

The various ſtimuli influencing the vaſcular action or circulation of plants, may be reduced to water, heat, vital air, light, electric matter, and ſome artificial ſtimuli, as nitre, ſal ammoniac, ſulphur, &c. according to the experiments of different authors on this ſubject.

CXXXVIII.

Vegetable Temperature.

Every plant is poſſeſſed of a certain natural temperature connected with its portion of vital principle; and in conſequence of this it is enabled to reſiſt the variations of the atmoſphere.

CXXXIX.

The power of reſiſting cold is remarkably dif-

played by the roots of ſome plants; and, though even incruſted the whole winter with ice, the tree to which they belong bloſſoms vigorouſly the following ſpring.

CXL.

Nor does the cold, which deſtroys the reſt of the plant, ſeem in the greater number of caſes to have the ſame influence on the root. Even on any part of the evergreens of the northern regions, froſt ſeems to make little impreſſion; and wherever the juices of plants are of a more tenacious nature, they ſuffer leſs from cold than thoſe purely aqueous.

CXLI.

Nor is the power of reſiſting exceſs of heat in ſome plants, leſs conſpicuous than that of others in reſiſting extreme cold. Thus graſs will be found cool in the midſt of ſummer, when the ſoil itſelf feels warmed; and cucumbers preſerve a coolneſs to the touch, when every part around them is heated in the extreme. The ſame thing is alſo obſervable in fruits while on the trees.

CXLII.

Thus the temperature of plants ariſes from the abſorption of heat from the atmoſphere; and hence the coolneſs felt in the ſhade of trees.

CXLIII.

In different plants this power of attraction and retenſion of heat varies, and in the evergreens of

northern climates an accumulation of latent heat muſt clearly prevail. The manner in which this heat is drawn into the plant, is not clearly eſtabliſhed; but the abſorption of caloric muſt give riſe to new combinations in the ſyſtem of the plant, which, ſimilar to what occurs in animals from reſpiration, will prove one cauſe of the increaſe of temperature.

CXLIV.

The general benefits ariſing to plants from heat, or an increaſed temperature, are its augmenting the irritability of their fibres, and occaſioning all their functions to be regularly performed, and its rendering alſo the ſap and other fluids fitter to pervade their various veſſels. After the death of the plant, a diſſolution and new combination of their component parts is produced by it, which putrefaction abundantly ſhews.

CXLV.

Vegetable Senſibility.

The irritability of plants has been already detailed, or that vital energy inherent in the vegetable fibre. This energy conſiſts in a certain capacity which vegetables poſſeſs for receiving the action of certain ſtimuli, formerly detailed as applied to them; and this capacity we find ſo ſtrong, as often to occaſion them certain motions with a view to receive it. Thus, when a plant is placed in a dark ſituation, and light only admitted to it at

one part, it is directed in its growth towards this ſituation from its attraction for that ſtimulus.

CXLVI.

Hence, ſimilar to the animal fibre, the vegetable poſſeſſes a certain degree of ſenſibility, although no nerve has been traced in its ſtructure. This is conſiderably varied in different individuals, but in ſome it appears nearly equal to that of the animal itſelf, as in the ſenſitive and moving plants, which ſeem conſcious, by the contraction of their fibres, of the leaſt irritation.

CXLVII.

Connected with this ſenſibility of the vegetable fibre, vegetables we find alſo poſſeſſed of certain motions, and theſe conſiſt in their altering in ſome meaſure the direction of their parts, which takes place twice a day, bearing themſelves always towards the ſource of heat; but, independent of this, every plant forms a certain twiſt, or takes a particular direction in its growth, which we cannot account for.

CXLVIII.

This ſtructure of the vegetable fibre requires the conſtant application of the vegetative powers to continue its excitement; and when theſe are by the occurrence of night, or the removal of heat and light in a certain degree taken away, a ſtate of relaxation, or leſſened vigour, which we term ſleep, ſimilar to that in the animal, is induced.

CXLIX.

Vegetable Sleep.

This confifts in the bending of their leaves, and fometimes their ftem, in different ways, fo as to encircle, and at times totally hide their flower; and this ftate they recover from as foon as the fun communicates to them a certain degree of light and heat; for the degree requifite for their recovery varies in different plants; and hence they come to be unfolded at different hours of the day; yet, even excefs of heat and light, as well as its removal to a certain degree, will produce the fame ftate, and thus in the hot-houfe at mid-day, many are found in this fituation.

CL.

Thefe effects, then, depend on their principle of irritability; and the variety in different plants in regard to the poffeffion of more or lefs of this principle muft depend upon the capacity of their fibres to receive it. Hence every plant has a degree of it peculiar to itfelf, and hence one fpecies is deprived of its irritability by external ftimuli, when another poffeffes the capacity of bearing them with impunity. Many plants alfo become gangrenous in the fpring time after a fevere cold night, while others are not in the leaft hurt, which all afford proof of the fame fact.

CLI.

The capacity of receiving this principle is varied

alſo in plants at different times; and this principle ſeems general; ſo that the irritation of one fibre produces a correſponding effect on the reſt, varying only in degree, according to the diſtance from the ſeat of impreſſion. This is very conſpicuous on touching the ſenſitive plant.

CLII.

Nor is this principle of irritability inexhauſtible. It is gradually diminiſhed by the frequent application of a ſtimulus, and may be even totally exhauſted. Thus the motion of plants depends on an irritable muſcular ſtructure of their fibres, which, in ſome of them, as the moving plant, is diſplayed in a remarkable degree; and in all of them ſome ſenſe is apparent in the flowers, for thoſe of common dandelion we find turn towards the ſun, and expand at a particular time of the day, when the ſun is ſtrong to act upon them; and at other times they always cloſe again, eſpecially if the ſun comes to be clouded, and there is an appearance of rain.

CLIII.

The peculiar irritations or ſtimuli that excite this action of the vegetable fibre, were already conſidered. They conſiſt of light, heat, water, vital air, and electric fluid in a gentle degree. Of this, light ſeems to exert a remarkable influence, for it is common to vegetables which are made to grow in the inſide of houſes and on the

ſoles of windows, to turn their tops towards the light, though the heat of the room be greater than the external air, and the part turned towards the room hotter than the part turned towards the window; ſo that if the light of the ſun acted by heating the vegetables only, it ought to turn the other way, as that ſide is the hotteſt. But the plant called balſamy, for inſtance, which is uſually on the ſide of windows, turns its top towards the window; and if the earthen-pot is turned round, in two days the top is again turned round towards the window: ſo both the leaves and flowers of plants, and indeed the whole plant, has a diſpoſition to be affected by light, to be ſtimulated by it, or they have ſome kind of ſenſibility which diſpoſes them to turn towards it.

CLIV.

This alſo appears in certain roots, and other vegetables which grow ſpontaneouſly in cellars, as in the common leek when it lies till the return of the warm ſeaſon, when it ſhoots its fibres in a direction ſtraight towards the door or window where a little light is admitted into the cellar. And for the ſame reaſon do trees grow more upright in a thick wood than in any other ſituation. When the light is admitted from above, they have a tendency directly upwards; and there is no other way to have a tree tall and ſtraight, but by making them grow thick in this manner.

CLV.

Numerous inſtances of theſe effects of light in different plants may be adduced, and theſe effects are moſt conſpicuous at certain times of the day; for the irritability of all plants is generally greateſt in the morning and noon, leſs during exceſſive heat, and leaſt in the evening.

CLVI.

In the ſame manner, as certain ſtimuli increaſe the irritability of the vegetable fibre, ſo thoſe of an oppoſite nature we find diminiſh and deſtroy it. This happens alſo from exceſs of heat, from cold, from light, from foul air, from electricity, and from opium, according to the degree in which they are applied.

CLVII.

The ſleep of plants, by the cloſing of their petals and leaves, though a fact ſufficiently aſcertained, takes place at different times with different individuals. Though like that of animals, it generally takes place in the evening and at night, yet in others it only happens when they are expoſed to the ſtrongeſt ſtimulus of light and heat. Others ſleep the whole day, and expand their leaves at ſun-ſet; and others only ſhut and cloſe their petals ſome hours in the day. This ſtate of reſt is evident in many plants by their external appearance, and it is no doubt connected with their principle of irritability, which being exhauſted,

for the time requires this neceſſary ſuſpenſion or interval in order to be repaired.

CLVIII.

We have thus conſidered the general fabric of the vegetable body and the principles of vegetation, or the ſeveral powers by which the vegetable is raiſed and matured; it remains to examine the circumſtances of its decay, and afterwards the means of its reproduction.

CLIX.

Decay of Vegetables.

The firſt of theſe, or the decay of vegetables, is much regulated by the period of their growth, or of their attaining maturity. Some exiſt only for a ſingle ſeaſon, or even for a ſhorter duration; others are lengthened to two ſeaſons, or three; and the life of others is extended from 100 to 1000 years. Thus vegetables are divided, from the period of their exiſtence, into annual, biennial, and perennial. Trees and fruits arrive often to a conſiderable age, and acquire in conſequence an amazing ſize. The extent of their age may be often aſcertained by examination of their ligneous rings or circles; but this inveſtigation, as already noticed, is difficult in many, and impoſſible in others.

CLX.

Vegetable life, like the animal, may alſo, in the courſe of its progreſs, be divided into certain ſtages.

The firſt, when the vegetable is ſoft, ſucculent, and ſhews every mark of weakneſs and tenderneſs, may be termed the period of infancy.

The ſecond, when it is diſtinguiſhed by beauty, verdure, and an approaching fullneſs of growth, forms the period of youth.

The third, when the fruit ripens, conſtitutes the age of the plant, when a dryneſs and hardneſs of every part gradually advances, when the juices are ſlowly circulated through its ſyſtem, when its veſſels begin to cloſe up, and the energy of their vital power to be gradually diminiſhed.

By the progreſs of this ſtate, ſtagnation and corruption take place; and thus, whatever the term of the duration of vegetables, the ultimate change ſooner or later muſt enſue, and they ceaſe to live.

CLXI.

But this extinction of life is not always complete at one time. In many plants it conſiſts only of the parts of fructification; and in moſt trees the leaves yearly die, and are renewed in the ſucceeding one. But this partial death muſt at laſt be ſucceeded by the more general one in every part of the plant.

CLXII.

This general extinction of life occaſions a decompoſition of its principles. It is now ſubjected to the power of chemical laws, which the poſſeſ-

ſion of its vital principle enabled it hitherto to reſiſt. Putrefaction takes place, (a proceſs examined in another place,) and in conſequence of it new combinations are formed by its parts, and they are prepared into food for the ſupport of that claſs of bodies to which it formerly belonged.

CLXIII.

The vegetable therefore dies, becauſe it is no longer poſſeſſed of the powers of vegetation; and the power of vegetation it diſplays by its growth, and by its capacity of having its parts unfolded from the ſeed, when the latter is put into the ſoil. Thus, if a plant does not change its appearance, or decay, though the marks of vegetation are ſlight, it poſſeſſes ſtill its vital principle, and vegetation will continue to proceed after this apparent ſuſpenſion. Thus, alſo, though ſeeds are kept for years, if they grow when put into the ſoil, their life has remained all this time unimpaired.

CLXIV.

Vegetable Reproduction.

Having thus traced the circumſtances of vegetable decay and death, which appears to happen leſs from the loſs of the vegetative principle, than from the inaptitude of their organs to continue longer the exerciſe of their functions, it remains to view the means of their reproduction, which are either natural or artificial. The firſt, or natural mode of perpetuating vegetables, is by the

feeds, termed their femination; but as the rearing them in this way, though the natural one is often tedious, so different modes of artificial propagation have been invented, and these are by roots, by layers, and by grafting.

CLXV.

The first is chiefly employed in the bulbous plants, which have all on their root or stem a number of eyes or gems, from each of which, when committed to the soil, a recent growth is produced. The second, or by layers, only takes place in trees, and it consists either in allowing part of a branch to touch the ground when it will take root, or detaching it entirely from the parent, and planting it, when the same effect will follow, which is termed propagation, by cuttings. The third, or that of grafting, is a more nice operation, and proceeds on this general principle, that when plants are brought together, and the bark destroyed, they naturally fix and become connected; and to ensure, therefore, its success, it should be done when the vital energy of the plant is most active, as in the months of June or August, while the parts to be united are accurately applied together, and the exclusion of whatever may diminish the vital principle cautiously guarded against.

CLXVI.

Such is the view offered of the first means by which a knowledge of Botany is attained, con-

fifting in the examination of their vegetable ftructure and œconomy; but, as the extent of vegetable creation is unbounded, to render this knowledge of ufe and applicable to all the varieties of vegetable matters that occur, it is neceffary to confine it within certain limits, by reducing them to fyftem, or arranging them under certain general heads; and in forming this, termed claffification, the appellation affigned to each is to be derived from the obfervation of their fimilar ftructure, and, as far as can be done, fimilarity alfo of their qualities.

CLXVII.

In marking the latter, the chief importance of botanical knowledge confifts; and this is to be attained, in a certain degree, as we formerly obferved, by the application of vegetables to the fenfes of tafte and fmell.

CLXVIII.

Organ of Tafte.

The tafte depends upon the different principles which conftitute the humours of the plant, and is different not only in different plants, but in different parts of the fame plant.

CLXIX.

The organ of tafte comprehends all thofe parts which extend from the lips to the ftomach, and are lined with a delicate excretory membrane, which, in its healthy ftate, is kept always moift;

and on the degree of its moiſture giving ſenſibility to the body applied, the acuteneſs of taſte much depends.

CLXX.

Various Senſations of Taſte.

The ſenſe conveyed by the impreſſion of taſte is conſiderably diverſified, and is generally conſidered as differing in degree, duration, fixedneſs, diffuſibility, and, in the quick and ſlow action with which the impreſſion is conveyed. Taſtes are alſo to be conſidered as in their nature either ſimple or compound.

CLXXI.

Of ſimple taſtes, 10 different ſpecies have been uſually obſerved, which are;

1. The ſweet, or ſugar taſte.
2. The oleous, or animal taſte.
3. The ſaline, or ſea taſte.
4. The bitter, or permanent taſte.
5. The acid, or ſucculent taſte.
6. The vapid, or inſipid taſte.
7. The aſtringent, or vegetable taſte.
8. The hot, or acromatic taſte.
9. The cold, or frigid taſte; and,
10. The pungent, or burning taſte.

CLXXII.

From theſe, different compound taſtes have been formed, and the compound taſtes commonly mentioned are; 1. The auſtere, 2. the aceſcent, and 3.

the acrid; and from confidering the fimple ones, the compound may be eafily underftood.

CLXXIII.

Senfation of Smell.

Next to the fenfe of tafte in diftinguifhing the nature of fubftances, is applied that of fmell, which acts only on thofe fubftances from which an odour is exhaled; and its application is therefore lefs univerfal than that of tafte.

CLXXIV.

The matter on which odour depends is of two kinds, being either a common excretion from the vegetable, when by bruifing the part it is entirely deftroyed; or being a matter contained in certain bags or veficles formed for that purpofe, and which form therefore its repofitory.

CLXXV.

The diverfity of fmell, as marked by authors, is nearly as great as that of tafte; and the varieties of it ufually mentioned, are;

1. The rofeaceous.
2. The alfaceous.
3. The goatifh.
4. The violet, and their feveral compounds.

CLXXVI.

In the application of thefe two fenfes, attention is to be paid. For to judge of the nature of fubftances by tafte, it is neceffary to begin with

thofe which convey the weakeft impreffion firft, and the fapidity of the former fhould be entirely gone before the application of another; while, as the organ of fmell again poffeffes fuch a remarkable fympathy with the whole body, fo as by the application of certain fubftances to occafion faintings, &c.; where a body is unknown, caution fhould be ufed in examining it, and its odour allowed gradually to affect the part.

PART II.

CLASSIFICATION.

CLXXVII.

IN entering upon the ſubject of claſſification, it is neceſſary that the Botanical Language, or Terms, be fully underſtood, and for this purpoſe a more minute deſcription and acquaintance with the various parts of the plant is required than what ſuited the more general detail in the former part. In doing this, we ſhall proſecute the method of arrangement purſued by the late Dr. Hope, as adopted in his Termini Botanici; for the utility of the ſtudent, giving the original of it on one ſide, and the tranſlation on the other.

RERUM SERIES.

I. Nomina Partium.

Termini Generales, qui omnibus partibus conveniunt.

II. Termini qui exprimunt modos Durationis.
III. Magnitudinis.
IV. Subſtantiæ.
V. Diviſionis.
VI. Directionis.
VII. Figuræ.
VIII. Expanſionis.
IX. Loci.
X. Sitûs.
XI. Superficiei.
XII. Marginis.
XIII. Apicis.

Termini Speciales, qui quibuſdam partibus tantum conveniunt.

XIV. Termini qui conveniunt Radici.
XV. Trunco.
XVI. Petiolo.
XVII. Folio.
XVIII. Pubi.
XIX. Armis.
XX. Bracteæ.
XXI. Pedunculo.

Sub hoc Inſloreſcentia et ejus modi.

In tracing then the outlines of a plant for the purpofes of Claffification, we confider,

I. The NAMES of its Several PARTS.

GENERAL TERMS applicable to all Parts whatever.

II.	Terms which exprefs the mode of	Duration.
III.		Magnitude.
IV.		Subftance.
V.		Divifion.
VI.		Direction.
VII.		Figure.
VIII.		Expanfion.
IX.		Place.
X.		Situation.
XI.		Surface.
XII.		Margin.
XIII.		Point, or top.

SPECIAL TERMS which are only applicable to particular parts.

XIV.	Terms which apply to the	Root.
XV.		Trunk.
XVI.		Petiole.
XVII.		Leaf.
XVIII.		Down, or hair,
XIX.		Armour.
XX.		Floral Leaves.
XXI.		Peduncle.

Under this are included the Inflorefcence and its different modes.

XXII. Termini qui conveniunt Fructificationi.
Sub hâc continentur.

A. Calix.
B. Corolla.
C. Stamen.
D. Piſtillum.
E. Pericarpium.
F. Semen.
G. Receptaculum.

XXIII. Termini qui conveniunt Vernationi.
XXIV. Termini addendi.

No. I. PARTES PLANTÆ *ſunt*,

1 RADIX, organum nutriens plantam.
2 TRUNCUS, organum multiplicans plantam.
3 RAMUS, diviſio et ſubdiviſio caulis.

4 PETIOLUS, fulcrum ſuſtinens folium.
5 PEDUNCULUS, fulcrum ſuſtinens fructificationem.

6 FOLIUM, organum motûs plantæ.

7 STIPULA, ſquama quæ baſi petiolorum enaſcentium adſtat.
8 CIRRHUS, vinculum filiforme ſpirale, quo planta alii corpori alligatur.
9 BRACTEA, folium florale, facie e cæteris foliis recedens.

XXII. Terms which apply to the Fructification.
Under this are included.

- A. The calyx, or cup.
- B. The carolla, or coloured part of the flower.
- C. The ſtamina, or chives.
- D. The piſtillum.
- E. The pericarpium, or ſeed-caſe.
- F. The ſeed.
- G. The receptacle.

XXIII. Terms which apply to the Vernation.
XXIV. Additional Terms.

No. I. *The* PARTS *of a* PLANT *are*,

1 The root, that organ that nouriſhes the plant.
2 The trunk or ſtalk, the organ that multiplies it.
3 The branches, or diviſions and ſubdiviſions of the ſtalk.
4 The petioles, or ſtalks that ſupport the leaves.
5 The peduncles, or ſtalks that ſupport the fructification.
6 The leaves, which are the organs of motion to the plant.
7 The ſtipula, or ſmall ſcaly leaf that uſually ſtands at the baſe of the petioles when they are riſing.
8 A cirrhus, tendril, or ſpinal thread, by which a plant is tied to any neighbouring body.
9 A bractēa, ſpangle, or florid leaf, differing in its appearance from the other leaves of the plant.

10 PUBES, hirſuties omnis in planta.

11 ARMA, mucrones arcentes animalia, ne lædant plantam.

12 BULBUS, hybernaculum plantæ e rudimento foliorum præteritorum.

13 GEMMA, hybernaculum plantæ e rudimentis foliorum futurorum.

14 FRUCTIFICATIO, conſtans ex flore et fructu.

Partes Floris ſunt,

a CALIX, cortex plantæ in fructificatione præſens.

b COROLLA, liber plantæ in flore præſens.

c STAMINA, viſcera pro pollinis præparatione.

d PISTILLUM, viſcus fructui adhærens, pro pollinis receptione.

Partes Fructûs ſunt,

e PERICARPIUM, viſcus gravidum ſeminibus, quæ matura dimittit.

f SEMEN, rudimentum novæ plantæ pollinis irrigatione vivificatum.

g RECEPTACULUM, quâ partes fructificationis connectuntur.

10 The pubes, the down or hairyneſs of any ſort on plants.

11 Arma, the armour or ſharp points that defend a plant from being hurt by animals.

12 A bulb, the winter habitation of a plant, conſiſting of the remains of its former leaves.

13 A gem or bud, conſiſting of the rudiments of the plant's future leaves.

14 The fructification, conſiſting of the flower and the fruit.

The Parts of a Flower are,

a The cup, or outer rind of the plant, continued to and preſent in the fructification.

b The corolla, or inner rind of the plant, continued to and preſent in the coloured part of the flower.

c The ſtamina, or chives, the organs deſtined for the preparation of the pollen or flower-duſt.

d The piſtil, or organ adhering to the fruit, for the reception of the pollen.

The Parts of the Fruit are,

e The pericarpium, or ſeed-caſe; the bowel or organ containing the ſeeds, which, when ripe, it lets go.

f The ſeed, or rudiment of a new plant, ſuppoſed to be vivified by the irrigation or ſprinkling of the pollen or flower-duſt.

g The receptacle, or baſe with which the parts of the fructification are connected.

TERMINI GENERALES.

No. II. Duratio Plantæ *est vel,*

15 Annua, intra annum emoritura.
16 Biennis, altero anno florens, et dein peritura.
17 Perennis, per plurimos annos virens.
18 Caduca, brevi decidens, nec per integram æstatem permanens.
19 Decidua, peracta unica æstate, casura.
20 Persistens, peracta æstate, non casura.
21 Sempervirens, per omnia tempora anni virens.

No. III. Magnitudo.

" Admitto rarissime aliam mensuram, quam
" proportionalem, inter plantæ partes diversas,
" ubi pars hæc vel illa, longior aut brevior,
" latior aut angustior sit altera."

Phil. Bot. p. 262.

No. IV. Substantia *est vel,*

22 Solida, interne materia duriuscula farcta.
23 Inanis, interne medulla spongiosa farcta.
24 Pulposa, materia tenaci farcta.

25 Carnosa, interne pulpa solidiuscula referta.
26 Cartilaginea, e materia sicca pellita.
27 Membranacea, e materia sicca pellita.

28 Fistulosa, interne tubulosa.

GENERAL TERMS.

No. II. *The* Duration *of a Plant is either,*

15 Annual, or dying within one year.

16 Biennial, or flowering the ſecond year, and then dying.

17 Perennial, or flouriſhing for many years.

18 Caducous, or falling down and dying before the end of one ſeaſon.

19 Deciduous, or dying at the end of one ſeaſon.

20 Perſiſting, not dying after one ſeaſon.

21 Sempervirent, evergreen, or retaining freſh and green through all the ſeaſons of the year.

No. III. Magnitude.

"I very ſeldom admit," ſays Linnæus, "any "other than the proportional meaſure between "the different parts of plants, where this or that "part is longer or ſhorter, broader or narrower, "than another." *Phil. Bot.* p. 262.

No. IV. Substance *is either,*

22 Solid, filled internally with hard matter.

23 Inane, filled only with ſpongy matter.

24 Pulpous, filled with tenacious or glutinous matter.

25 Carnous, or fleſhy, filled with a hardiſh pulp.

26 Cartilaginous, conſiſting of griſtly matter.

27 Membranous, conſiſting of dry and ſkinny matter.

28 Fiſtulous, tubulated or hollow within.

No. V. Divisio *est vel*,

29 Fiſſa, diviſa marginibus rectis.

30 2—5 fida, pro numero fiſſurarum.

31 Partita, ad baſin fere diviſa.
32 2—5 partita, pro numero diviſionum.

33 Lobata, ad dimidium diviſa in partes diſtantes.

34 Sinuata, lateribus ſinus dilatatos admittens.

35 Dichomata, trichomata, &c. in duas treſve partes ſemper diviſa.

No. VI. Directio *est vel*,

36 Recta, flexuris deſtituta.
37 Erecta, fere ad perpendiculum ſe attollens.
38 Obliqua, a perpendiculari vel horizontali linea diſcedens.
39 Aſcendens, arcuatim ſurſum verſa.
40 Declinata, arcuatim deorſum verſa.

41 Incurvata, arcuatim introrſum verſa.
42 Nutans, apice extrorſum verſa.

43 Reflexa, partibus retrorſum flexis.
44 Revoluta, in ſpiram recurvata.
45 Procumbens, debilis terræ innitens.
46 Flexuoſa, horſum verſum flexa.

No. V. Division *is either*,

29 Fiſſured, or divided by linear notches, with ſtraight margins.

30 Bifid, trifid, &c. to quinquefid, according to the number of fiſſures.

31 Partite, divided almoſt to the baſe.

32 Bipartite, tripartite, &c. to quinquepartite, according to the number of diviſions.

33 Lobate, or lobed, divided down to the middle into parts ſtanding aſunder.

34 Sinuted, admitting of wide ſinuſes or notches on the ſides.

35 Dichotomous, trichotomous, &c. divided ſucceſſively into two, three, or more parts.

No. VI. Direction *is either*,

36 Right, or ſtraight, free of bendings.

37 Erect, riſing nearly to a perpendicular.

38 Oblique, departing from a perpendicular, or horizontal line.

39 Aſcending, or turned archwiſe upward.

40 Declining, or declined, turned archwiſe downward.

41 Incurvated, turned archwiſe inward.

42 Nutant, nodding, having the point turned inward.

43 Reflex, having any part turned inward.

44 Revolute, rolled back into a ſpinal line.

45 Procumbent, weak and leaning on the ground.

46 Flexuoſe, bent hither and thither.

Termini ſequentes pertinent potiſſimum ad directionem ramorum.

47 Patens, exprimit directionem anguli acuti ſupra gradum.

48 Divergens, ad angulum rectum diſcedens.

49 Divaricata, exprimit directionem anguli obtuſi.

50 Dependens, terram rectà ſpectans.

51 Diſticha, duo latera reſpicientes, licet undique inſerti.

52 Secunda, omnes ad alterum latus flexi.

53 Adpreſſa, quum cauli paralleli approximantur.

54 Coarctata, verſus ſummitatem fere incumbentes.

55 Diffuſa, ramulis patentibus.

No. VII. Figura *eſt vel Superficierum, vel Solidorum, vel ex Analogia mutuata.*

a. Superficierum eſt vel,

56 Orbiculata, figuræ circularis.

57 Subrotunda, ſubcircularis, et ſubgloboſa.

58 Ovata, cujus diameter longitudinalis ſuperat tranſverſalem, baſi ſegmento circuli circumſcripta, apici anguſtiore.

59 Parabolica, parabolam referens.

60 Elliptica, ellipſin referens.

The following terms respect chiefly the direction of branches.

47 Patent, expreſſes the direction of an acute angle, or an angle above 45 degrees.

48 Diverging, parting at a right angle.

49 Divaricated, expreſſes the direction of obtuſe angle.

50 Dependent, looking ſtraight to the ground.

51 Diſtich, or diſtichated, [flowers, leaves, or branches,] turning to the two ſides, though inſerted all round.

52 Sequent, turning all to one ſide.

53 Appreſt, approaching ſo as to be almoſt parallel to one ſtalk or trunk.

54 Coarctate, almoſt incumbent towards the top.

55 Diffuſe, having ſmall pointed branches.

No. VII. FIGURE *is that, either of Surfaces, or Solids, or Similitudes.*

a. The Figure of a Surface is either,

56 Orbicular, of a circular form.

57 Subrotund, almoſt circular; and ſubgloboſe, almoſt ſpherical.

58 Ovate, having its longitudinal diameter longer than the tranſverſe, with the baſe terminated by a ſegment of a circle, and the top narrower.

59 Parabolical, reſembling a parabola.

60 Elliptical, reſembling ellipſe or oval.

61 Cuneiformis, fenfim verfus bafin anguftata.

62 Oblonga, diametro longitudinali aliquoties fuperante tranfverfalem.

63 Lanceolata, oblonga, ab utraque extremitate attenuata.

64 Linearis, æquali ubique latitudine.

65 Triangularis, quadrangularis, &c. pro numero angulorum.

66 Rhombea, forma rhombi.

67 Trapeziformis, forma trapezii.

b. Solidorum eft vel,

68 Filiformis, æquabili ubique craffitie.

69 Attenuata, verfus apicem craffiitiem perdens fenfim.

70 Subulata, linearis, fed verfuc apicem attenuata.

71 Clavata, verfus apicem incraffata.

72 Turbinata, obverfe conica.

73 Globofa, figura fphæræ.

74 Conica, conum referens.

75 Teres, cylindrum referens.

76 Semiteres, femicylindrica.

77 Anceps, angulis duobus oppofitis acutis.

61 Cuneiform, wedge-ſhaped, growing by degrees narrower towards the baſe.

62 Oblong, having the longitudinal diameter any number of times longer than the tranſverſe diameter.

63 Lanceolate, oblong, and attenuated on either end.

64 Linear, every where of equal breadth.

65 Triangular, quadrangular, according to the number of angles.

66 Rhombeous, or rhomboidal, of the ſhape of a rhombus.

67 Trapeziform, of the ſhape of trapezium.

b. The Figure of Solids is either,

68 Filiform, every where of equal thickneſs.

69 Attenuated, gradually loſing its thickneſs towards the point.

70 Subulated, awl-ſhaped; linear, but attenuated towards the point.

71 Clavated, club-ſhaped, growing thicker towards the point.

72 Turbinated, top-ſhaped, like an inverted cone.

73 Globoſe, globular, like a ſphere.

74 Conical, reſembling a cone.

75 Teres, round, like a cylinder.

76 Semiteres, half-round, ſemicylindrical.

77 Anceps, two-edged, having the two oppoſite angles acute.

78 Trigona, tetragona, &c. angulis tribus, quatuor, &c. prominentibus longitudinalibus.

79 Triquetra, lateribus tribus exacte planis.

80 Gibba, utraque superficie convexa, mediante copiosiore pulpa.

81 Compressa, pulposa, lateribus magis quam disco complanatis.

82 Depressa, pulposa, disco magis quam lateribus complanato.

83 Lingulata, linearis, carnosa, subtus convexa.

84 Ensiformis, anceps, a basi ad apicem sensim attenuata.

85 Acinaciformis, compressa, carnosa, altero margine convexo augusto, altera rectiore crassiore.

86 Dolabriformis, compressa, subrotunda, extrorsum gibba, acie acuta, inferne teretiuscula.

Tubulosæ figuræ, quæ plerumque ad corollam pertinent, sunt,

87 Infundibuliformis, conica tubo imposita.

88 Campanulata, ventricosa, tubo destituta.

89 Inflata instar vesicæ, cava.

78 Trigonous, tetragonous, &c. having three, four, &c. prominent longitudinal angles.

79 Triquetrous, having three exactly plain ſides.

80 Gibbous, or gibboſe, having both upper and under ſurface convex, by reaſon of a more copious pulp intervening.

81 Compreſſed, pulpous, having the edges flatter than the diſc or middle.

82 Depreſſed, pulpous, having the diſc flatter than the edges.

83 Lingulated, tongue-ſhaped; linear, carnous, convex below.

84 Enſiform, ſword-ſhaped, ancipitous, gradually attenuated, or tapering from the baſe to the top.

85 Acinaciform, ſabre-ſhaped, compreſſed, carnous, having the one edge convex and thin, and the other ſtraighter and thicker.

86 Dolabriform, hatchet-ſhaped, compreſſed, ſubrotund, gibbous on the outſide, with the edge ſharp, and roundiſh below.

The tabulated figures that are moſtly applied to the corolla are,

87 Infundibuliform, funnel-ſhaped, an inverted cone placed upon a tube.

88 Campanulated, bell-ſhaped, ventricoſe, without any tube.

89 Inflated, hollow, and as it were blown up like a bladder.

90 Rotata, plana, nulli tubo impoſita.

c. Ex Analogia, eſt vel,

91 Cordata, ſubovata, baſi ſinu exſculpta, abſque angulis poſticis.

92 Reniformis, ſubrotunda, baſi ſinu exſculpta, abſque angulis poſticis.

93 Lunata, ſubrotunda, baſi ſinu diviſa, angulis poſticis acutis.

94 Sagittata, triangularis, angulis poſticis acutis ſinu diviſis.

95 Haſtata, ſagittata, angulis poſticis ſinu diviſis, ad latera prominentibus.

96 Lyrata, tranſverſim diviſa in lacinias, quarum inferiores remotiores.

97 Runcinata, pinnatifida, (*i. e.* tranſverſim diviſa in lacinias horizontales oblongas), ita ut lobi, antice convexi, poſtice ſint tranſverſi, *e. g.* leontodon.

98 Panduriformis, oblonga, lateribus inferne anguſtata.

99 Spathulata, ſubrotunda, baſi anguſtiore lineari.

90 Rotated, wheel-ſhaped, plain, and not placed on a tube.

c. The Figure of Similitudes is either,

91 Cordate, heart-ſhaped, ſubovate, having a notch cut out of the baſe, without any poſterior angles.

92 Reniform, kidney-ſhaped, ſubround, having a a notch cut out of the baſe, without poſterior angles.

93 Lunular, creſcent-ſhaped, ſubrotund, having the baſe notched with acute poſterior angles.

94 Sagittated, arrow-ſhaped, triangular, having acute poſterior angles ſeparated by a notch.

95 Haſtated, halbert-ſhaped, ſagittated, having the the poſterior angles divided by a blunt notch, and prominent toward the ſides.

96 Lyrated, lyre-ſhaped, divided acroſs into laciniæ, or ſegments of no determinate form, whereof the under ones are leſſer and more remote from one another than the upper ones.

97 Runcinated, pinnatifid (*i.e.* divided acroſs into horizontal oblong ſegments), in ſuch ſort that the ſegments are convex on the fore-ſide and tranſverſe behind, *e. g.* the dandelion.

98 Panduriform, pandour-ſhaped, oblong, and coarctated or narrowed below.

99 Spathulated, ſubrotund or roundiſh, with a linear and narrower baſe.

100 Palmata, divisa ultra dimidium in lobos subæquales.

101 Ventricosa, a lateribus gibba.

102 Deltoïdea, rhombea, ex quatuor angulis, e quibus laterales minus a basi distant quàm reliqui. Confer folia populi nigræ.

No. VIII. Expansio *est vel*,

103 Plana, superficie æquali.

104 Canuliculata, supra sulco profundo longitudinaliter excavata.

105 Concava, margine disco arctiore, ut deprimatur discus.

106 Convexa, margine disco arctiore, ut elevetur discus.

107 Cucullata, lateribus ad basin conniventibus, apice vero dilatatis.

108 Undata, disco plicis obtusis alternatim flexo.

109 Crispa, margine luxuriante, ut discus evadat longior sua rachi.

No. IX. Locus.

a. Folium est vel,

110 Radicale, radici insidens.

100 Palmated, divided paſt the middle into lobes nearly equal.

101 Ventricoſe, gibbous or ſwelling out on the ſides.

102 Deltoïd, rhomboïdal, conſiſting of four angles, of which the lateral ones are leſs diſtant from the baſe than the other two; as the leaves of black poplar.

No. VIII. Expansion *is either*,

103 Plain, having an equal ſurface.

104 Canuliculated, hollowed above with a deep longitudinal furrow.

105 Concave, by the margin being leſs in proportion than the diſk, and the diſk of courſe depreſſed or puſhed downwards.

106 Convex, by the margin being leſs in proportion than the diſk, ſo that the diſk is elevated or puſhed upwards.

107 Cucullated, cowl-ſhaped, having the edges folded or curling inwards at the baſe, and ſpreading at top like a cowl.

138 Undated, waved, having the diſk alternately bending up and down in obtuſe plaits.

109 Criſped, curled, by having the margin ſo luxuriant that the diſk becomes longer than its rachis or quill.

No. IX. Place.

a. A Leaf is either,

110 Radical, growing out of the root.

111 Caulinum, cauli insidens.

112 Rameum, ramo insidens.

113 Axillare, sub rami basi insertum.

114 Florale, flori proximum.

b. Stipula.

115 Lateralis, lateribus petioli inserta.

116 Extrafoliacea, infra folium collocata.

117 Intrafoliacea, supra folium collocata.

118 Oppositifolia, in latere folio opposito collocata.

c. Cirrhus.

119 Petiolaris, petiolo insidens.

120 Peduncularis, pedunculo insidens, &c. &c.

No. X. Situs *partium plantæ est vel,*

121 Oppositus, cùm folia, &c. per paria opposité collocata sint.

122 Alternus, per gradus circum ramum exorta.

123 Decussatus, ita disposita opposite, ut, apice inspecto, quatuor ordines referant.

124 Verticillatus, plura truncum ad genicula circumdantia.

125 Bifarius, ad latera rami opposita tantum enata.

111 Cauline, growing on the caulis or ſtalk.
112 Ramous, growing a branch.
413 Axillary, placed under the baſe of a branch.
114 Floral, next the flower.

b. A Stipula, or Scale, is either,

115 Lateral, inſerted into the ſide of a petiole.
116 Extrafoliaceous, placed below a leaf.
117 Intrafoliaceous, placed above a leaf.
118 Oppoſitifolious, placed on the ſide of the ſtalk oppoſite to the leaf.

c. A Chirrus, or Tendril, is either,

119 Petiolar, growing out of a petiole or leaf-ſtalk.
120 Peduncular, growing out of a peduncle, or flower-ſtalk.

No. X. *The* SITUATION *of the Parts of a Plant is either,*

121 Oppoſite, when the leaves, &c. are placed in decuſſated or croſs pairs.
122 Alternate, growing all round a ſtalk or branch one after another gradually.
123 Decuſſated, placed oppoſite in ſuch a manner, that if one look down from the top of the plant, the leaves, &c. repreſent four diſtinct rows.
124 Verticillated, whirled; leaves, flowers, &c. ſurrounding the ſtalk or trunk at the joints in great number like a whirl.
125 Bifarious, leaves, &c. growing only on the oppoſite ſides of a ſtalk or branch.

126 Sparsus, absque certo ordine constituta.

127 Fasciculatus, plura ex eodem puncta prodeuntia.

128 Confertus, plurima totam fere superficiem occultantia.

129 Distans, situ remota.

130 Terminalis, ad apicem posita.

No. XI. SUPERFICIES *est vel*,

131 Nuda, setis et pilis destituta.

132 Lævis, superficie æquali. Idem quod plana.

133 Glabra, superficie lubrica.

134 Nitida, glabritie lucente.

135 Lucida, quasi illuminata.

136 Colorata, alio colore quam viridi, (cum is sit color naturalis.)

137 Lineata, nervis depressis.

138 Striata, lineis parallelis leviter excavata.

139 Sulcata, lineis profundis excavata.

[*Qui sequuntur termini usque ad* 148, *pertinent præcipue ad folia*.

140 Nervosa, vasis simplicissimis a basi ad apicem.

141 Trinervis, tribus nervis in basi concurrentibus.

142 Triplinervis, nervosa, tribus nervis supra basin concurrentibus.

126 Sparſe, placed without any certain order.

127 Faſciculated, pencilled, growing in numbers out of the ſame point like a pencil.

128 Confert, cloſe-ranged, leaves, &c. almoſt covering the whole ſurface.

129 Diſtant, parts removed from one another.

130 Terminal, placed at the top.

No. XI. *A* SURFACE *is either.*

131 Naked, deſtitute of ſetæ or briſtles, and pili or hairs.

132 Levigated, ſmooth, of an equal plainneſs. The ſame with the plain.

133 Glabrous, of a ſlippery nature.

134 Nitid, ſlippery and ſhining.

135 Lucid, as it were illuminated.

136 Coloured, of a colour different from green (when that is the natural colour).

137 Lineated, lined, the nerves being depreſſed.

138 Striated, gently furrowed in parallel lines.

139 Sulcated, furrowed in deep lines.

[*The following Terms, to* 148, *belong chiefly to Leaves.*]

140 Nervous, having unconnected ſmall veſſels, reſembling nerves, running from the baſe to the top.

141 Trinerved, having three ſmall nerves meeting at the baſe.

142 Triplinerved, having three nerves meeting above the baſe.

143 Trinervata, nervosa, tribus nervis pone basin concurrentibus.
144 Enervis, nervosæ opposita, sine nervis.
145 Venosa, vasis multifariam divisis.

146 Avenis, venosæ opposita, sine venis.
147 Rugosa, rugis referta.
148 Bullata, ex rugosa venis contractis ab altera parte concava.

149 Lacunosa, disco depresso venas interjectas.

150 Punctata, adspersa punctis excavatis.
151 Papillosa, tecta punctis carnosis.

152 Papulosa, tecta punctis vesicularibus.

153 Scabra, punctis eminentibus rigidis exasperata.

No. XII. MARGO *est vel*,

154 Integerrimus, ipso margine lineari, nec minimum secto.
155 Crenatus, margine incisuris sine respectu extremitatis secto.
156 Serratus, omnibus incisuris respicientibus extremitatem.
157 Ciliatus, setis parallelis longitudinaliter digestis.

143 Trinervated, having three nerves meeting below the bafe.

144 *Enervis*, nervelefs, the oppofite to nervous.

145 Venous, having veins or fmall veffels divided varioufly, without any regular order.

146 *Avenis*, veinlefs, the oppofite to venous.

147 Rugofe, wrinkled, full of wrinkles.

148 Bullated, having the furface, from being rugofe, raifed up in the form of bubbles, by the veins being contracted, the other fide by that means becoming concave.

149 Lacunous, pitted, by the difk being depreffed between the interfperfed veins.

150 Punctuated, befprinkled with hollow points.

151 Papillous, covered with carnous or flefhy points.

152 Papulous, covered with veficula or bladder-like points.

153 Vifcid, befmeared with a glewy moifture.

No. XII. *A* MARGIN *is either*,

154 Entire, linear without the leaft dent or notch.

155 Crenated, having notches without refpect to the extremity.

156 Serrated, faw-toothed, all the notches and teeth looking towards the extremity.

157 Ciliated, having paralled briftles fet in a row lengthwife, like eye-lafhes.

158 Dentatus, acuminibus patentibus remiſſis.

159 Repandus, margine flexuoſo tamen plano.

No. XIII. Apex *eſt vel*,

160 Obtuſus, intra ſegmentum circuli terminatus.

161 Emarginatus, crena terminatus.
162 Retuſus, terminatus ſinu obtuſo.
163 Truncatus, linea tranſverſali terminatus.
164 Acutus, terminatus angulo acuto.
165 Acuminatus, apice ſubulato terminatus.

166 Cuſpidatus, terminatus apice ſetaceo.

TERMINI SPECIALES.

No. XIV. Radix.

167 Fibroſa, tota conſtans fibrillis.
168 Bulboſa, bulbo inſtructa.
169 *a.* Solida.
170 *b.* Squamata, ſquamis imbricatis.
171 *c.* Tunicata, inſtructa tunicis extra tunicas.
172 Tuberoſa, e partibus carnoſis filo baſi connexis.
173 Faſcicularis, e partibus carnoſis baſi ſeſſili connexis.
174 Granulata, particulis carnoſis compoſita.
175 Fuſiformis, ſimpliciuſcula attenuata.
176 Repens, longe excurrens, hinc inde germinans, articulata, geniculis intercepta.

158 Dentated, toothed, with the points patent and aſunder.

159 Repand, having a plain ſerpentine form.

No. XIII. *An* APEX, *or Point, is either,*

160 Obtuſe, terminated within the ſegment of a circle.

161 Emarginated, terminated by a notch.

162 Retuſe, terminated by a round boſom.

163 Truncated, terminated by a tranſverſe line.

164 Acute, terminated by an acute angle.

165 Acuminated, terminated by a ſublated or awl-ſhaped point.

166 Cuſpidated, terminated by a briſtle or prickle.

SPECIAL TERMS.

No. XIV. *A* ROOT *is either,*

167 Fibrous, conſiſting wholly of ſmall fibres.

198 Bulbous, furniſhed with a bulb.

169 *a.* Solid.

170 *b.* Scaly, with the ſcales imbricated.

171 *c.* Tunicated, having coats above coats.

172 Tuberous, conſiſting of fleſhy parts connected by threads to the baſe.

173 Faſcicular, conſiſting of fleſhy parts connected to the baſe without the intervention of threads.

174 Granulated, compoſed of ſmall fleſhy particles.

175 Fuſiform, ſpindle-ſhaped, ſingle and tapering.

176 Repent, running out a great way, and budding here and there.

No. XV. Truncus.

177 *a.* Caulis, truncus elevans et fructificationem et folia.

178 *b.* Culmus, graminibus proprius.

179 *c.* Scapus, elevans fructificationem, nec folia.

180 *d.* Stipes, truncus in folia transiens.

181 Scandens, alta petens, aliis sustinendus.

182 Volubilis, spiraliter ascendens per alia corpora.

183 Repens, terræ incumbens, radiculasque agens.

184 Sarmentosus, filiformis, geniculis radicantibus.

185 Stoloniferus, turiones ad radicem edens.

186 Simplicissimus, ramis vix ullis.

187 Simplex, continua serie versus apicem extensus.

188 Integer, simplicissimus, ramis angustatis.

189 Prolifer, ex apicis centro tantum emittens ramos.

190 Subramosus, ramis paucissimis lateralibus.

191 Ramosus, ramis pluribus lateralibus.

No. XV. *A* Trunk *is*,

177 *a*. A ſtem or ſtalk; a trunk ſupporting both the fructification and the leaves.

178 *b*. A culm, proper to graſſes.

179 *c*. A ſcapus or ſhaft; a trunk ſupporting the fructification, but not the leaves.

180 *d*. A ſtipes or ſtock; a trunk changing into leaves.

181 Scandent, climbing, but needing the ſupport of other bodies.

182 Voluble, twining, aſcending in a ſpiral line by the aſſiſtance of other bodies.

183 Repent, creeping, lying on the ground and ſending out roots here and there.

184 Sarmentoſe, full of twigs, filiform, with rooting joints.

185 Stoloniferous, putting forth young ſhoots at the root, or tillering.

186 *Simpliciſſimus*, very ſingle, having ſcarcely any branches.

187 *Simplex*, ſingle, with the branches gathering inwards.

188 Entire, very ſingle, with the branches gathering inwards.

189 Proliferous, putting forth branches only from the middle of the top.

190 Subramoſe, having only a few lateral branches.

191 Ramoſe, having many lateral branches.

192 Ramoſiſſimus, ramis multis abſque ordine cumulatis.

193 Virgatus, ramuſculis debilibus inæqualibus.

194 Paniculatus, ramis varie ſubdiviſis.

No. XVI. Petiolus.

195 Alatus, lateribus dilatatus.

196 Spineſcens, indureſcens et pungens.

No. XVII. Folium *eſt vel ſimplex vel compoſitum.*

a. Simplex.

197 Submerſum, intra aquæ ſuperficiem abſconditum.

198 Natans, ſuperficiei aquæ incumbens.

199 Aceroſum, lineare, perſiſtens.

Inſertio Foliorum.

200 Petiolatum, petiolo ad baſin inſerto.

201 Peltatum, petiolo diſco folii inſerto.

202 Adnatum, pagina ſuperiore baſi ramis adnexum.

203 Connatum, oppoſitorum partibus baſi utrinque coadunitis.

204 Coadunitum, plura inter ſe connata.

205 Decurrens, baſi folii deorſum per caulem extenſa.

192 *Ramosissimus*, very ramose, loaded with numerous branches, without any determinate order.

193 Virgated, having small weak pliant branches of unequal length.

194 Panicled, having branches variously subdivided.

No. XVI. *A* Petiole *is either filiform, or*,

195 Alated, winged, dilated on the sides.

196 Spinescent, hard and prickling.

No. XVII. *A* Leaf *is either simple or compound.*

a. A simple Leaf may be,

197 Submersed, hid under the surface of water.

198 Natant, swimming, lying on the surface of the water.

199 Acerous, chaff-like, linear and persistent.

The Insertion of Leaves.

200 Petiolated, having a petiole inserted at its base.

201 Peltated, or targetted, having the petiole in the disk of the leaf.

202 Adnate, connected with the branches at the base on the upper side.

203 Connate, having the opposite pairs united at the base on each side.

204 Coadunite, having more than two united.

205 Decurrent, having the base of the leaf running along the stalk downwards.

206 Amplexicaule, baſi caulem ambiente.

207 Perfoliatum, baſi tranſverſim cingente (nec antice dehiſcente) caulem.

208 Vaginans, baſi formante tubum, caulum veſtientem.

b. Compoſitum, petiolo plura quam unum proferente folia.

209 Articulatum, folio ex apice folii excreſcente.

210 Digitatum, petiolo ſimplici apici adnectente foliola. Binatum, ternatum, &c. modificationes ejus ex numero.

211 Pedatum, petiolo bifido, latere tantum interiore adnectente foliola plura.

212 Pinnatum, petiolo ſimplici lateribus adnectente foliola plura. Bijugum, quadrijugum, &c. foliolis tantum quatuor, octo, &c. &c.

Cum impari, foliolo unico (impari) terminatum.

Abrupte, nec cirrho nec foliolo terminatum.

Cirrhoſum, cirrho terminatum.

Foliolis oppoſitis.

206 Amplexicaul, having the base surrounding or embracing the stalk.

207 Perfoliated, having the base surrounding the stalk straight across, without any opening before.

208 Vaginating, or sheathing, having the base forming a tube that covers the stalk.

a. A Leaf is called Compound, when the same Petiole produces more Leaves than one. It is

209 Articulated, joined, when one leaf joins out of the top of another.

210 Digitated, when a simple petiole connects leaflets or small leaves at the top. Binate, ternate, &c. are modifications of it according to the number of leaflets thus connected.

211 Pedated, when a bifid or forked petiole connects several leaflets only by the interior side.

212 Pinnated, or feathered, when a simple petiole connects any number leaflets to its sides. Bijugous (double paired), quadrijugous (four-paired), &c. when only four, eight, &c. &c. leaflets are thus connected:

Pinnated with an odd one, when terminate by a single or odd leaflet.

Abruptly, when terminated neither by a tendril nor by a leaflet.

Cirrhous, when terminated by a tendril.

With opposite leaflets.

Foliolis alternis.

Foliolis interruptis, foliolis alternis minoribus.

Foliolis decursivis, foliolis petiolo decurrentibus.

c. Decompositum.

213 Bigeminum, petiolo dichotomo, apice adnectente foliola bina.

214 Biternatum, duplicato ternatum.

215 Bipinnatum, duplicato pinnatum.

d. Supradecompositum.

216 Tergeminum, cum petiolus bis dichotomus singulis apicibus bina fert foliola.

217 Triternatum, triplicato ternatum.

218 Tripinnatum, triplicato pinnatum.

STIPULA.

CIRRHUS.

No. XVIII. PUBES.

219 Tomentum, villi intertexti vix conspicui.

220 Pili, ductus excretorei plantæ setacei.

221 Villi pili molles.

222 Lana, pili curvi, densi.

With alternate leaflets.

With interrupted leaflets, when the leaflets are alternately greater and ſmaller.

With decurſive leaflets, or leaflets running down the petioles.

c. A Decompound Leaf is either,

213 Bigeminous, q. double-twin, leaves, when the petiole is dichotomous, or ſucceſſively divided into two, and every top carried a pair of leaflets.

214 Biternated, doubly ternated.

215 Bipinnated, doubly pinnated.

d. A Supradecompound Leaf is either,

216 Tergeminous, while the petiole, being twice dichotomous, or divided into two, bears a pairs of leaflets.

217 Triternated, thrice ternated.

218 Tripinnated, thrice pinnated.

Stipula, or Scale.

Cirrhus, or Tendril.

No. XVIII. PUBES, *the hair, wool, &c. of plants, is either,*

219 *Tomentum*, a ſtock, fine interwoven hairs ſcarcely viſible.

220 *Pili*, excretory ducts of a plant reſembling ſetæ or briſtles.

221 *Villi*, ſoft hairs.

222 *Lana*, curled thick hairs.

223 Barba, pili paralleli.
224 Strigæ, pili rigidi plani.
225 Setæ, pili rigidi teretes.
226 Palea, lamella membranacea.
227 Hamus, mucro acuminatus curvatus.
228 Glochis, mucro apici retrorſum multidentatus.
229 Glandula, papilla humorem excernens.

230 Utriculus, vaſculum liquore ſecreto repletum.
231 Viſcoſitas, qualitas humoris tenacis.

232 Glutinoſitas, qualitas humoris lubrici.

No. XIX. Arma.

233 Aculei, mucrones pungentes plantæ cortici tantum affixi.
234 Furca, aculeis diviſis in plures.
235 Spinæ, mucro e ligno plantæ protruſus.

236 Stimuli, mucrones puncturas exflammatorias efficientes, unde pruriginoſæ evadant partes.

No. XX. Bractea.

237 Coma, bracteæ caulem terminantes, magnitudine inſignes.

223 *Barba*, a beard, parallel hairs.

224 *Strigæ*, comb-teeth, ſtiff rigid plain hairs.

225 *Setæ*, briſtles, ſtiff round hairs.

226 *Palea*, a membranaceous ſcale.

227 *Hamus*, a hook, an acuminated crooked point.

228 *Glochis*, a point or prickle with many teeth turned backwards.

229 Glandule, a papilla, or ſmall gland ſecreting moiſture.

230 Utricle, a ſmall veſſel full of ſecerned moiſture.

231 Viſcoſity, expreſſes the quality of tenacious moiſture.

232 Glutinoſity, expreſſes the quality of ſlippery humour.

No. XIX. Arma, *The arms of plants are either*,

233 *Aculei*, prickles, prickling points affixed only to the bark.

234 *Furcæ*, forks, prickles divided or forked.

235 *Spinæ*, thorns, points or prickles put forth from the wood of the plant.

236 *Stimuli*, points producing the inflammatory punctures, where the parts become itching.

No. XX. *A* Bractea *is either*,

237 *Coma*, the bracteæ or ſpangles on the top of the ſtalk of ſome plants, remarkable in ſize compared to the other leaves.

No. XXI. PEDUNCULUS.

238 Communis, communis pluribus floribus.

239 Partialis, pedunculi communis aliquot flores proferens.

240 Pedicellus, proprius floribus in pedunculo communi.

241 Cernuus, apice terram fpectans.

242 Retrofractus, vi quafi ad dependentiam redactus.

243 Multiflorus, multos flores proferens.

244 INFLORESCENTIA, modus, quo flores pedunculo plantæ adnectuntur.

245 *a.* Verticillus, floribus pluribus caulem annulatim ambientibus.

246 *b.* Capitulum, floribus pluribus in globum congeftis.

247 *c.* Fafciculus, colligens flores erectos, parallelos, faftigiato-approximatos.

248 *d.* Spica, flores feffiles alterni in pedunculo communi fimplici.

249 Simplex, continua, indivifa.

250 Compofita, pluribus fpicillis pedunculo infidentibus.

No. XXI. *A* PEDUNCLE *is either,*

238 Common, to more flowers than one.

239 Partial, bearing any number of flowers of the common peduncle.

240 A pedicle, proper to flowers in a common peduncle.

241 Cernuous, ſtooping, having the top looking to the ground.

242 Retrofract, broken backward, reduced to a depending ſtate as if by force.

243 Multiflorous, producing many flowers.

244 INFLORESCENCE is the mode in which flowers are connected to the peduncle of a plant; and this is either,

245 *a. Verticillus*, a whirl, when a number of flowers ſurround the plant in a ring.

246 *b. Capitulum*, a knot, when a number of flowers are collected together in the form of a globe. It ſignifies alſo the upper parts of the fructification of moſſes.

247 *c. Faſciculus*, a bunch, when erect parallel flowers of equal height are collected together.

248 *d. Spica*, a ſpike, when ſeſſile alternate flowers are placed on a common ſimple peduncle. A ſpike is either,

249 Simple, continued and undivided.

250 Compound, when more ſmall ſpikes ſtand on one peduncle.

251 Glomerata, ſpicillis varie congeſta.

252 Interrupta, ſpicis minoribus alternis diſtantibus.

253 *e.* Corymbus fit ex ſpica, dum ſinguli flores petiolis propriis inſtruuntur, ſitu elevato proportionali.

254 *f.* Racemus, pedunculo ramis lateralibus inſtructo.

255 Unilateris, flores ad alterum latus omnes inſerti.

256 *g.* Panicula, flores ſparſi, in pedunculis diverſe diviſis.

257 *h.* Thyrſus, panicula coarctata in formam ovatam.

258 *i.* Umbella, receptaculum, ex eodem centro elongatum in pedunculo filiformes proportionatos.

259 Simplex, pedunculis omnibus ex uno eodemque receptaculo ortis.

260 Compoſita, omnibus pedunculis apice umbellulas gerentibus.

251 Glomorated, when the ſmall ſpikes are crowded together without any certain order.

252 Interrupted, when the ſmaller ſpikes are placed alternately and diſtant one from another.

253 *e.* A *corymbus* is formed of a ſpike, having every ſingle flower provided with a pedicle of its own, and the whole elevated to a proportionable height.

254 *f.* *Racemus*, a cluſter, when the common peduncle has lateral branches.

255 Unilateral, when all the flowers grow on one ſide.

256 *g.* *Panicula*, a panicle, when the flowers are ſparſe, and grow on peduncles variouſly divided.

257 *h.* *Thyrſus*, a panicle gathered into an ovate form.

258 *i.* *Umbella*, an umbel; a receptacle lengthened out from one centre into filiform peduncles riſing to a proportionable height, ſo as to reſemble an umbrella above.

259 Simple, when all the peduncles ſpring out of one and the ſame receptacle.

260 Compound, when every peduncle carries a ſmall umbel on its top.

261 Umbellula feffilis, plures pedunculi ex eodem centro ambitu æquali prodeuntes.

262 Cyma, receptaculum ex eodem centro univerfali, partialibus vero vagis, elongatum in pedunculos faftigiatos.

263 Rachis, receptaculum filiforme flofculos longitudinaliter adnectens in fpicam.

264 Spadix, receptaculum palmæ enatum intra fpatham, in ramulos fructificantes divifum.

No. XXII. Fructificatio.

265 Vegetabilium pars temporaria generationi dicata.

266 Simplex, paucis floribus conftans.

267 Compofita, pluribus flofculis confluentibus.

A. *Calix.*

268 *a.* Periantheum, calix fructificationi contiguus.

269 Fructificationis, ftamina germenque includens.

270 Floris, ftamina abfque germine continens.

271 Fructûs, germen abfque ftaminibus continens.

272 Proprium, quemlibet florem refpiciens.

261 *Umbellula seſſilis*, a ſmall ſeſſile umbel, when a number of peduncles riſe from the ſame centre, and ſtand equally all around it.

262 *Cyma*, a receptacle riſing from the ſame general centre, with partial ones here and there, and lengthened into peduncles all equally high at top.

263 *Rachis*, a filiform receptacle connecting any number of florets into a long ſpike.

264 *Spadix*, the receptacle of a palm tree riſing within a *ſpatha* or ſheath, and divided into fructifying branches.

No. XXII. Fructification *is*,

265 The temporary part of a vegetable deſtined to generation; and is either,

266 Simple, conſiſting of few flowers.

267 Compound, when a number of flowers are ſet together.

A. *Calyx*, the Cup.

268 *a. Perianthеum*, a cup contiguous to the fructification.

269 Of the fructification, containing the ſtamen and the germen.

270 Of the flower, containing the ſtamina without a germen.

271 Of the fruit, containing a germen without a ſtamina.

272 Proper, belonging to any particular flower; and is either,

273 Monophyllum, unico folio abſolutum.

274 Polyphyllum, pluribus foliis conſtans.

275 Superum, cui germen ſub receptaculo.

276 Inferum, cui germen ſupra receptaculum.

277 Commune, plures flores congregatos continens.

278 Caliculatum, calice quaſi alio minore calice ad baſin cincto.

279 *b.* Involucrum, calix a flore remotus.

280 Univerſale, umbellæ univerſali ſubjectum.

281 Partiale, umbellæ partiali ſubjectum.

282 Proprium, cuilibet flori ſubjectum.

283 *c.* Gluma, calix graminis, valvis amplexantibus.

284 Uniflora, unicum florem amplectens.

285 Multiflora, plures flores includens.

286 Ariſta, mucro ſubulatus glumæ inſidens.

287 Tortilis, flexa funis inſtar.

273 Monophyllous, consisting only of one leaf.

274 Polyphyllous, consisting of a number of leaves.

275 Superior; having the germen below the receptacle.

276 Inferior, having the germen above the receptacle.

277 Common, containing a number of flowers set together.

278 Caliculated, a calyx or cup, having as it were another lesser cup round its base.

279 *b. Involucrum*, or wrapper, a cup remote from a flower.

280 Universal, set under a partial umbel.

281 Partial, set under a partial umbel.

282 Proper, set under any particular flower.

283 *c. Gluma*, a glume or chaff, the cup of any kind of grass, consisting of valves embracing one another. Either

284 Uniflorous, containing a single flower.

285 Multiflorous, containing any number of flowers.

286 Arista, or awn, a tapering point growing out of the glume or chaff; either straight, or

287 Tortile, twisted like a cord.

288 *d.* Amentum, ex receptaculo communi paleaceo gemmaceo.

289 *e.* Spatha, calix longitudinaliter ruptus.

290 *f.* Calyptra, calix muſci cucullatus antheræ ſuperimpoſitus.

291 *g.* Volva, calix fungi membranaceus.

B. *Corolla.*

292 Petalum, pars corolæ in plures diviſæ.

293 Tubes, corollæ monopetalæ pars inferior.

294 Limbus, corollæ monopetalæ pars ſuperior dilatata.

295 Unguis, corollæ polypetalæ pars inferior, receptaculo affixa.

296 Lamina, corollæ polypetalæ pars ſuperior patula.

297 Regularis, æqualis et ſimilis figura, ſitu, magnitudine, et proportione partium diverſa.

298 Irregularis, limbi partibus figura, magnitudine, et proportione partium diverſa.

299 Ringens, irregularis, in duo labia hians.

300 Galea-ringentis, labium ſuperius.

288 *d. Amentum*, a catkin, confifting of a chaffy common receptacle like a gem or bud.

289 *e. Spatha*, fpath or fheath, a cup opening longitudinally.

290 *f. Calyptra*, a hood, the cowl-fhaped cup of fome moffes placed over the anthera.

291 *g. Volva*, the membranaceous cup of a mufhroon.

B. *Corolla, or the coloured part of a flower.*

292 Petal, a part of a carolla when divided into more parts than one.

293 Tube, the inferior part of a monopetalous corolla.

294 Limb, the fuperior fpreading part of a monopetalous corolla.

295 *Unguis*, the heel, the inferior part of a polypetalous corolla affixed to the receptacle.

296 *Lamina*, a lappet, the fuperior fpreading part of a polypetalous corolla.

297 Regular, equal in figure, magnitude, and proportion of parts.

298 Irregular, when the fegments of the limb differ in figure, magnitude, or proportion of parts.

299 Ringent, irregular, gaping like two lips opened very wide.

300 *Galea-ringentis*, the vizard or upper lip of a ringent corolla.

301 Faux, hiatus inter licinias corollæ, ubi tubus terminatur.

302 Cruciata, petalis quatuor æqualibus patens.

303 Perfonata, ringens, fed inter labia palato claufa.

304 Papilionacea, irregularis, petalo inferiore cymbiformi (carina), fuperiore afcendente (vexillum, lateribus folitariis (alæ).

305 Compofita, pluribus conftans flofculis intra commune perianthium, fupra receptaculum.

306 *a*. Ligulata, corollulis flofculorum omnibus planis, verfus exterius latus.

307 *b*. Tubulofa, corollulis flofculorum omnibus tubulofis fubæqualibus.

308 *c*. Radiata, corollulis difci tubulofis, ambitus vero ligulatis difformibus.

309 Nectarium, pars mellifera propria.

C. *Stamen.*

310 Filamentum, pars elevans, adnectenfque antheram.

301 *Faux*, the throat or opening between the ſegments of a corolla, where the tube terminates.

302 Cruciated, croſſed, having four equal and patent petals.

303 *Perſonata*, maſked, ringent, but ſhut cloſe between the lips by the palate.

304 Papilionaceous, butterfly-ſhaped, irregular; the inferior petal being cymbiform, or ſhaped like a boat, (called the *carina* or keel); the ſuperior aſcending, (called the *vexillum* or flag); the ſide petals ſtanding ſingle, (called the *alæ* or wings).

305 Compound, conſiſting of a number of florets on a common receptacle, and within a common perianthium.

306 *a*. Ligulated, having all the exterior florets plain on the outſide.

307 *b*. Tubulous, having all the ſmall corollæ of the florets tubulated.

308 *c*. Radiated, having all the ſmall corollæ of the diſc tubulous, and thoſe of the circumference ligulated, and of a different form.

309 Nectary, the melliferous part, proper to any flower.

C. *Stamen, a Chive.*

310 Filament, the part ſupporting the anthera, connecting it with the plant.

311 Anthera, pars floris gravida polline quod matura dimittit.

312 Pollen, pulvis floris, humore rumpendus, atomosque elasticos ejaculans, (Genitura plantarum).

D. *Pistillum.*

313 Germen, rudimentum fructûs immaturi in flore.

314 Superum, corollæ inclusum.

315 Inferum, infra corollam positum.

316 Stilus, pars pistilli elevans stigma à germine.

317 Stigma, summitas pistilli madida humore.

E. *Pericarpium.*

318 *a.* Capsula, pericarpium cavum determinate dehiscens.

319 Valvula, paries quo tegitur fructus externè.

320 Loculamentum, concameratio cava pro seminum loco.

321 Dissepimentum, paries, quo fructus internè distinguitur in concamerationes plures.

322 Bicapsularis, à numero capsularum.

323 Bilocularis, à numero loculamentorum.

311 Anthera, the part of a flower which is full of pollen, or fine flower-duſt, which it diſcharges as ſoon as itſelf comes to maturity.

312 Pollen, flower-duſt, burſting by being brought into contact with moiſture, and throwing out elaſtic atoms. (According to the principles of the ſexual ſyſtem, this is the origin of generation in plants).

D. *Piſtillum, a Piſtil.*

313 Germen, the rudiment of the unripe fruit in a flower. This is either,

314 Superior, included in the corolla.

315 Inferior, placed below the corolla.

316 Stile, the part of the piſtil that raiſes the ſtigma from the germen.

317 Stigma, the ſummit of the piſtil bedewed with moiſture.

E. *Pericarpium, a Fruit caſe, is a*

318 *a.* Capſule, a fruit-caſe, hollow, and opening in a certain determinate manner.

319 Valvule, a ſcreen or defence with which the fruit is covered on the outſide.

320 *Loculamentum*, a hole or cavity for lodging the ſeeds.

321 *Diſſepimentum*, a partition by which the fruit is diſtinguiſhed or divided within into any number of cavities.

322 Bicapſular, having two capſules.

323 Bilocular, having two cavities.

324 Tricocca, capſula tribus nodis protuberans, intùſque in tria loculamenta diviſa, ſingulis unicum ſemen continentibus.

325 Didyma, capſulâ duobus nodis extus gibbâ.

326 *b.* Siliqua, pericarpium bivalve affigens ſemina ſecundùm utramque ſuturam.

327 Toruloſa, prominentiis hinc inde gibba.

328 Parallelum diſſepimentum, latitudine et diametro tranſverſali ad valvulas accedens.

329 Tranſverſum diſſepimentum, anguſtius ubi valvulæ coarctatæ evadunt concavæ.

330 *c.* Legumen, pericarpium bivalve, affigens ſemina ſecundùm ſuturam alteram tantùm.

331 Iſthmis interceptum, in varia loculamenta internè tranſverſim diſtinctum.

332 *d.* Folliculus, pericarpium univalve altero latere longitudinaliter dehiſcens, nec ſuturæ ſemina affigens.

324 Tricoccous, a capſule having three protuberant knobs, and divided into three cavities within, each containing one ſeed.

325 Didymous, having two knobs protuberant on the outſide.

326 *Siliqua*, a huſk, a fruit-caſe having two valves, and attaching the ſeeds along both ſutures.

327 *Toruloſa*, having prominences ſwelling out on each ſide.

328 *Parallelum diſſepimentum*, a parallel partition of equal breadth with the valves.

329 *Contrarium diſſepimentum*, a croſs partition narrower than the valves.

330 *c. Legumen*, a cod or ſwob, a pericarpium having two valves, and attaching the ſeeds only along the one ſuture.

331 *Iſthmis interceptum*, having parts at regular diſtances ſtraiter than the reſt, ſo as to divide it acroſs into different internal cavities.

332 *d.* Follicle, a pericarpium of one valve, opening longitudinally on one ſide, and not having the ſeeds attached to the ſuture.

333 *e.* Drupa, pericarpium farctum, evalve, continens nucem.

334 *f.* Pomum, pericarpium farctum, evalve, continens capsulam.

335 *g.* Bacca, pericarpium farctum, evalve, semina, cæteroquin nuda, continens.

336 Nidulantia, semina per pulpam sparsa.

337 *h.* Strobilus, pericarpium ex amento factum squamis induratis.

F. *Semen.*

338 Hilum, cicatrix externa seminis ab ejusdem affixione in fructu.

339 Corculum, primordium novæ plantæ intra semen.

340 Corona, caliculus supra adhærens, quo volitat.

341 Pappus, corona pennacea pilosave volitans.

342 Stipitatus, filo elevante et adnectente pappum et semen.

333 *e. Drupa*, a plum, a pericarpium ſtuffed with fleſhy ſubſtance, without any valve, and containing a nut or ſtone in the middle.

334 *f. Pomum*, an apple or pear, a pericarpium ſtuffed with fleſhy ſubſtance without valves, and containing a capſule or ſeed-caſe in the middle.

335 *g. Bacca*, a berry, a pericarpium full of pulpy or ſoft ſubſtance, without valves, and containing ſeeds, otherwiſe naked.

336 Nidulant, neſtling, ſeeds diſperſed through a pulpy or ſoft ſubſtance.

337 *h. Strobilus*, a cone, a pericarpium formed by the induration of the ſcales of a catkin.

F. *Semen, the Seed.*

338 *Hilum*, a ſpeck, the external ſcar or mark of the ſeed, occaſioned by its attachment to the fruit-caſe before it comes to maturity.

339 *Corculum*, the original ſubſtance of a new plant within a ſeed.

340 *Corona*, a crown or dreſs, adhering to the top of a ſeed, by which it is enabled to fly about after it is ripe.

341 *Pappus*, down, a feathery or hairy crown with which it flies.

342 *Stipitatus*, ſtalked, having a thread betwixt it and the down.

343 Capillaris, pilis indivifis.
344 Plumofus, pilis pennatis conftans.

345 Cauda, femen terminatum filo.

346 Hamus
347 Caliculus, tegmentum feminis proprium.

348 Nux, femine tecto epidermide offeo.

349 Arillus, tunica propria exterior feminis fponte fecedens.

G. *Receptaculum.*

350 Commune, plures flores et fructus continens.

351 Compofitus flos, receptaculo dilatato, integro, flofculis feffilibus.

352 Aggregatus flos, receptaculo dilatato, flofculis fubpedicellatis.

Bulbus.
Gemma.

No. XXIII. Vernatio.

353 Foliorum difpofitio intra gemmam.
354 Conduplicata, foliorum lateribus parallel approximatis.

343 Capillary, confifting of fine undivided hairs.

344 Plumofe, feathery, confifting of hairs feathered on the fides.

345 *Cauda*, a tail, a thread or membrane at the end of a feed.

346 *Hamus*, a hook.

347 *Caliculus*, the interior and proper integument of a feed.

348 *Nux*, a kernel, a feed covered with a bony fhell.

349 *Arillus*, the outer coat of a feed, which falls off of its own accord.

G. *Receptaculum, a Receptacle.*

350 Common, containing more flowers and fruits than one.

351 Compound, or compofite flower, having the receptacle dilated and entire, the florets feffile.

352 Aggregate flower, having the receptacle dilated, and the florets fubpedicellated, or ftanding on very fhort flower-ftalks.

Bulbus, a bulb.

Gemma, a gem or bud.

No. XXIII. VERNATION *is the*

353 Difpofition of leaves within the bud.

354 Conduplicated, doubled together, having the oppofite edges approaching each other in parallel lines.

355 Convoluta, cuculli in modum ſpiralia.

356 Involuta, lateribus verſus paginam ſuperiorem utrinque ſpiraliter contortis.

357 Revoluta, lateribus verſus paginam inferiorem utrinque ſpiraliter contortis.

358 Equitans, marginibus conniventia ſitu oppoſito, ut alterum includat alterum.

359 Obvoluta, pagina ſuperiore lateribus approximatis, ita ut alterum latus diſtinguat alterum folium.

360 Plicata, in plicas varias coarctata.
361 Circinalis, in ſpiram tranſverſalem coarctata, ut apex centrum obtineat.

No. XXV. TERMINI *addendi*.

362 Laxus, liberè flexibilis. Fere ſynonyma, debilis et flaccidus.

363 Rigidus, flexionis impatiens.
364 Articulatus, geniculis interceptus.
365 Enodis, ſine articulis.
366 Præmorſus, apice quaſi morſu abſciſſo.

367 Radicans, radices agens.

355 Convoluted, rolled together ſpirally like a cowl.

356 Involuted, rolled inwards, having the edges on both ſides rolled ſpirally, ſo as to be nearly met on the upper ſurface of the leaf.

357 Revoluted, rolled backwards, having the edges on both ſides rolled ſpirally ſo as to be nearly met on the back of the leaf.

358 Equitant, riding, when two leaves oppoſite to each other cloſe their edges, ſo that the one includes or claſps about the other.

359 Obvoluted, when two edges of one leaf cloſe on the upper ſurface, ſo that one edge divides or lies betwixt the two ſides of the other.

360 Plicated, plaited, gathered into various plaits.

361 Circinal, rolled ſpirally from the top to the baſe, ſo that the top comes to occupy the centre.

No. XXIV. General Terms *to be added.*

362 *Laxus*, flexible at pleaſure. *Debilis* (weak) and *flaccidus* (flagging) are almoſt ſynonymous.

363 Rigid, not enduring to be bent.

364 Articulated, jointed or knotted.

365 *Enodis*, without joints or knots.

366 *Præmorſus*, forebitten, having the top as it were bitten off.

367 Radicant, puſhing down roots.

368 Squamoſus, ſquamis adſperſus.

369 Proliferi flores, flore intra alium florem enaſcente.

370 Imbricatæ partes, quoad dimidiam partem invicem tectæ.

371 Squarroſus, dicitur de apice et laciniis, quum è plano promineant.

372 Faſtigiatus, quum trunci, rami, vel pedunculi, ad eandem altitudinem aſſurgant.

373 Reſupinatus, quum aliqua pars penitus invertatur.

374 Lacerus, dicitur de margine variè diviſo ſegmentis difformibus.

375 Laciniatus, dicitur de ſinubus diſci, variè et indeterminatè in partes ſecti.

368 Squamous, covered with ſcales.

369 Proliferous flowers, having one flower riſing within another.

370 Imbricated parts, one overlapping another like tiles or ſlates.

371 Squarroſe, rough or ſcurfy, applied to the tops or irregular ſegments of leaves, &c. when they ſtand out on all ſides.

372 Faſtigiated, trunks, branches, or peduncles riſing all to the like height.

373 Reſupinated, turned upſide down.

374 Lacerated, a term applied to the edges of flowers or leaves when divided irregularly as if they were torn.

375 Laciniated, divided into parts or ſegments in an indeterminate manner.

CLXXVIII.

From this view of the Botanical Terms, every plant for the purpofes of claffification is to be regarded as confifting of root, trunk, leaves, props, fructification, and habit.

CLXXIX.

The root confifts of two parts, the caudex and radicula, both of which are farther difcriminated by a variety of circumftances, as noticed.

1. The caudex, the body or knob, from which the trunk and branches afcend, is different in different plants, being either folid, bulbous, or tuberous.

2. The radicle, the fpongy or fibrous part of the root, defcends from the caudex, and is the fource of nourifhment, as already noticed.

CLXXX.

The trunk, or production from the caudex, is the feat of the leaves, flowers, and fruit, and is either herbaceous, fhrubby, or arborefcent, and is divided into four kinds, under the names of,

1. A caulis, ftalk, or ftem, as applied to trees, fhrubs, and herbs; and, if dividing, it is termed a compound one; if not, a fimple one.

2. A culmus, ftraw, or houlm, as forming the trunk of graffes, elevating both leaves and fructification, varying in its exact appearance, and form, being pointed, round, angular, &c.

3. A ſcapus or ſtalk immediately from the root, terminated by the flowers.

4. A ſtapes or ſlender trunk, ſuch as the ſtalk of muſhroons, or even others of a more ſlender kind.

CLXXXI.

The leaves are the production of the expanded veſſels of the ſtalk, forming a net-like ramification, and covered by a continuation of the epidermis of the plant. They are either ſimple or compound, and are further marked by a number of occaſional diſtinctions in their figure, ſituation, inſertion, number, diviſions, &c.; though a ſingle leaf is one that either adheres ſingly to a branch, or terminates by a ſimple expanſion, while a compound one has ſeveral ſeparate ſimple expanſions, and the place of the attachment of leaves is termed their determination. This is likewiſe diſtinguiſhed by various additional circumſtances.

CLXXXII.

The props are a part of the plant of conſiderable variety for its ſtrength, ſupport, and defence; and alſo as ſerving the purpoſe of a ſecretion. They are divided into

1. A petiolus, or foot-ſtalk.

2. A pedunculus, or ſupport of a flower.

3. A ſtipula, huſk, or ſmall leaf on each ſide the foot-ſtalk baſe.

4. A cirrhus, claſper, or tendril, in the form of a ſpiral ſtring or fibre.

5. The pubes, or ſuch parts as ſerve for defence and ſecretion under the form of hair, down, wool, beard, briſtles, glands, &c.

6. The arma, or vegetable means of defence, as thorns, prickles, &c.

7. The bracteæ, or floral leaves, compared to thin plates of metal.

CLXXXIII.

The fructification, or mode of bearing fruit, conſiſts of the parts formerly noticed, viz.

1. The calyx, or termination of the outer bark, termed the cup, intended to incloſe and ſupport the other parts of the fructification. Its ſeat is the receptacle. It varies in its figure, number, diviſion, and ſhape of its leaves or ſegments, and the following names are applied to it according to circumſtances.

2. A perianthium (or flower-guard) when ſurrounding the ſeat of the fructification; a common perianthium, when connected with ſeveral flowerets; a proper one, when only with one. There is alſo the perianthium of the flower, and the perianthium of the fruit.

3. Involucrum, when ſituated at the foot of an umbel at a diſtance from the flower, below the common receptacle. It is either univerſal or partial.

4. An amentum, a thong or catkin, when it is

compofed of a great number of pulpy fcales difpofed on a flender axis or common receptacle.

5. A fpatha or fheath, when it is a fort of calyx growing from the ftalk.

6. A gluma or hufk, as in corn and graffes, confifting of one or more valves folding over each other like fcales.

7. A calyptra or veil, the calyx to moffes, placed over the antheræ of the ftamina, and refembling a monk's hood.

8. A valva, or membranaceous infolding of the ftalk or pillar, as in fungi.

The calyx is fometimes diftinguifhed with difficulty from the bracteæ or floral leaves.

CLXXXIV.

The corolla, or wreath, confifts of the inner bark of the plant in the form of varioufly coloured leaves. Its fituation differs, being fometimes in the receptacle, fometimes in the calyx; while the latter forms the defence of the outer part, the corolla does the fame to the inner part, inclofed by it. The leaves of the corolla are termed petals, by the different circumftances of which it is particularly diftinguifhed. When it includes the germen, it is underftood to be below; and above, when it is placed in the reverfe fituation, or above the germen. The duration of this part differs alfo in different plants. In fome it remains till the ripening of the fruit, in others it decays with

the opening of the flower, in others it falls off with the ſtamina and other floral parts, and in ſome it gradually withers.

CLXXXVI.

Connected with this part is the petalous appendage termed the nectarium, in which the honey of the plant exiſts. This part diſplays much variety in its appearance, and has been divided into a number of kinds, as the calycine nectaria connected with the calyx, the corollaceous attached to the corolla, the ſtamineous, piſtillaceous, &c. The proper uſe of the nectarium is perhaps ſtill unknown; but it ſeems evidently eſſential to the fructification.

CLXXXVII.

The ſtamina, threads, or chives, the next fructiferous part, are the males of the flower, a production from the wood of the plant, and divided into the filament and antheræ.

CLXXXVIII.

The filament, or threaded part of the ſtamen, is the footſtalk by which the antheræ are elevated, and it is ſometimes jagged or divided, and is alſo diſtinguiſhed by its particular form or figure, by its proportion, and alſo by its ſituation.

CLXXXIX.

The anthera at the top or ſummit of the filament, or of the former part, contains the pollen or

impregnating flour, which renders it a part of the firſt importance to the fructification, and it is either common to each filament, or one anthera is extended to ſeveral; while, in the other extreme, there are ſometimes two antheræ to one filament, &c. It is diſtinguiſhed, alſo, by the variety in its form or figure, by the number of its cells, and by the manner in which it is faſtened to the filament, which differs widely in different individuals.

CXC.

The piſtillum, or female part of the flower, proceeds from the pith of the plant. It forms an erect column in the centre of the flower under the ſtamina, and it is divided into three parts, the germen, the ſtile, and the ſtigma.

1. The bud or germen is the baſe of the piſtills, and ſupports the ſtile. It becomes at laſt a ſeed-veſſel, and is properly the rudiment of the pericarpium. It differs in ſhape, number, and ſituation, and is above or below the corolla, according to the attachment of the latter.

2. The ſtile, or part elevating the ſtigma from the germen, is alſo diſtinguiſhed by conſiderable variety, as from numbers, from diviſions, from proportions, and from ſituation. By this part is the influence of the ſtamina received and conveyed to the germen. It is generally temporary as the other parts of the flower, but in ſome individuals it is permanent. Where wanting, the ſtigma and germen adhere.

The ſtigma is properly the head or ſummit of the ſtile; and is either ſituated on the top or ſide, and moiſtened with a fluid to retain the pollen of the antheræ. Like the other parts, it differs in its numbers, in its diviſions, in its figure or ſhape, in its length, in its thickneſs, and in its duration.

CXCI.

The pericarpium, or mature germen, grown to a matrix or ſeed veſſel, is not preſent in all plants, but its place is often ſupplied by the other parts. It is ſituated at the receptacle of the flower, either above or below, and is thus diſtinguiſhed according to the difference of its ſtructure, into

1. A capſule, or little cheſt, ſucculent when green, and when ripe, appearing a dry huſky ſeed veſſel, opening alſo in various ways, and externally ſhewing a number of valves, and internally a number of cells.

2. A ſiliqua, or pod, which is a pericarpium of two valves, and is divided into a real ſiliqua, or long pod; and a ſilicula, or round pod.

3. A ligumen, or pulſe, which is likewiſe a two-valved pericarpium, with the ſeeds faſtened to ſhort receptacles.

4. A foliculus, or little bag, being a pericarpium of only one valve, and the ſeeds faſtened to a receptacle within the fruit.

5. A drupa, or ſucculent or pulpy pericar-

pium, having no valve or external opening, but containing within its ſubſtance a ſtone or nut.

6. A pomum, or apple, which is a ſucculent pulpy pericarpium, without a valve, and containing in its middle a membranous capſule, interſected by cavities containing the ſeeds.

7. A bacca, or berry, which is equally a pulpy pericarpium without valves, incloſing one or more ſeeds, without any membranous capſule or covering.

8. A ſtrobilus, or cone, which is a pericarpium formed of an amentum or ſeed-veſſel, formed by woody ſcales placed againſt each other in the ſhape of a cone, opening only at top, and fixed below to an axis or receptacle in the middle of the cone.

CXCII.

The laſt part of fructification is the ſeeds, which is the eſſence of the fruit, deciduous, and poſſeſſed of the rudiments of a new vegetable, vitalized by the effect of the pollen. This part differs, like the others, in number, ſhape, texture, appendage, &c. but it has been commonly diſtinguiſhed by certain general diviſions of

1. The corculum, or heart, which is the principle of the future plant, and conſiſts of two ſeparate parts, the plumula, or aſcending part, which becomes the ſtem; and the roſtellum, or deſcending part, which forms the root in the

ſhape of a ſmall beak placed without the lobes, but attached to the plumula.

2. The cottyledons, or thick porous ſide lobes, conſiſting of farinaceous matter, or the nouriſhment of the future vegetable, which are afterwards diſplayed in the form of ſeminal leaves.

3. The hilum, or eye, being the external mark or ſcar where it was formerly faſtened within the pericarpium.

4. The arillus, or external coat of the ſeed, which ſpontaneouſly falls off, and is ſaid to be ſometimes wanting.

5. The coronula, or little calyx, adhering to the top of the ſeed like a little crown, and aſſiſting it to diſperſe, fly, or be ſcattered. This part varies much in its form in different caſes.

Two other varieties of ſeeds occur, viz. nux, a nut or ſeed incloſed in a ſhell or hard woody ſubſtance, and the ſeed contained here is called a kernel. Propago, or moſs ſeed, conſiſting of a naked plumula, with the roſtellum inſerted into the calyx of the plant.

CXCIII.

The laſt part of the fructification is the receptaculum, or baſe which ſupports and connects the reſt, and varies in ſhape and ſurface. It is diſtinguiſhed into the proper receptacle, when it ſupports the parts of a ſingle fructification only. When the parts of the flower only are joined to it,

it is termed the receptacle of the flower. When the ſeeds are faſtened to it, it is termed the receptacle of the ſeed. It forms a common receptacle, when again it ſupports or connects a head of flowers in common.

It is named alſo umbella, when applied to aggregate flowers, and cyma or a ſprout. It is named likewiſe rachis, when collecting the plants longitudinally into a ſpike or ſpadix, when the flower ſtalk is protruded from a ſpatha or calyx of that ſhape.

CXCIV.

Effloreſcence, or the mode by which flowers are joined to their ſeveral peduncles, whether common or partial, is an important part in botany, and flowers are accordingly either conſidered as complete or incomplete.

CXCV.

Complete flowers are either ſimple or aggregate; ſimple when every part of the fructification is confined to one flower only, aggregate when the flower conſiſts of many plants collected into one head by means of ſome part of the fructification common to them all. Thus from the different ſtructure, diſpoſition, and other circumſtances of the calyx or receptacle, being the only common part to them all, ſeven diviſions are formed;

1. Aggregate, or the formation of flowers, by the union of ſeveral leſſer ones on partial peduncles, having one common receptacle.

2. Compound aggregate, which confifts of feveral plants placed without partial peduncles, and farther divifions of this term alfo take place.

3. Umbellate aggregate, which confifts of many plants placed on a receptacle on faftigiate peduncles that are all produced from the fame point.

4. Cymous* aggregate, when feveral faftigiate peduncles proceed from the fame centre, and rife to an equal height.

5. Amentaceous aggregate, which confifts of fuch flowers as have a long common receptacle, along which are difpofed fquamæ or fcales.

6. Glumofe aggregate, where fuch flowers proceed from a common hufky calyx, as graffes.

7. Spadiceous aggregate, where thofe flowers have a common receptacle protruded from within a common calyx or fpatha, along which are difperfed feveral florets.

CXCVI.

To thefe aggregate modes of flowering, fome others fall to be added, as farther difcriminating the fpecies;

1. The *1ft* is the verticillus, when the flowers are placed in whirls at each joint round the common ftalk with fhort partial peduncles.

2. The fecond is the capitulum, or little head, when many flowers are collected into nearly a globular form or head on the fummit of the common ftalk.

3. Spica, or ſpike, when the flowers have no partial peduncles, but are arranged alternately round a common ſingle peduncle.

4. Corymbus, or cluſter, when the leſſer peduncles of the flowers proceed from different parts of the common peduncle or ſtalk, yet form a regular ſurface at the top.

5. Thyrſus, or ſtalk, when the lower peduncles which are longer horizontally, and the upper which are ſhorter, mount vertically.

6. Racemus, or bunch, when the flowers are placed in ſhort partial peduncles, proceeding as little lateral branches from and along the common peduncle.

7. Panicula, or tuft, when the flowers are diſperſed on peduncles variouſly ſubdivided, or when it forms a ſort of branching ſpike compoſed of ſmaller ones.

8. Axillaris, when flowers proceed from the angle formed by the leaf and the ſtem.

9. Terminalis, when flowers terminate the ſtalk or branch.

CXCVII.

To the diviſion of infloreſcence belongs alſo the conſideration of luxuriant flowers, which are to be conſidered as varieties and unnatural, and the luxuriance is confined to the corolla or calyx. It is divided into

1. Multiplicatus, when the petals of the corolla are ſo far multiplied as to exclude part of the

ſtamina, and it is farther termed according to the number of rows of petals.

2. Plenus, when the corolla is ſo much multiplied as to exclude all the ſtamina, which are thus changed into petals, and the roſtellum is choaked alſo.

3. Prolifer, when one flower grows out of another; and of this there are ſeveral ways in which it takes place, according to the nature of the flower.

CXCVIII.

Beſides luxuriance, mutilation alſo occurs as oppoſed to it, or the privation of certain parts of the flower, as of the greater part of the petals. This proceeds from the want of heat and other cauſes.

CXCIX.

With the efflorescence are alſo connected the ſexes of flowers, and they are divided into male, female, hermaphodite, and neuter.

The firſt are ſuch flowers as poſſeſs ſtamina.

The ſecond are ſuch as have only piſtils.

The third are ſuch as have both parts in the ſame flower.

The fourth are ſuch as have neither of the parts perfect; and from theſe ſexes of the flowers the plants are alſo denominated; as

Male plants, or ſuch as bear ſtamina only.

Female plants, or ſuch as have only piſtils.

Hermaphrodite plants, ſuch as have both.

Androgenous, ſuch as have both in the ſame root.

Polygenous are ſuch as bear hermaphrodite flowers on the ſame or different roots.

CC.

Habit of plants conſiſts in the agreement of the ſame genus or natural order in a variety of circumſtances; as,

1. In their germination, or in the ſtructure and diſpoſition of their bulb.

2. In their vernation, or the complication of their leaves within the bud.

3. In their eſtivation, or the ſtate of the bud during ſummer.

4. In their tortion, or the twiſting and bending of their parts.

5. In their nuptials.

6. In their ſemination, or the ſhape and other circumſtances of the ſeed and pericarpium.

7. In their placentation, or the number and diſpoſition of the cotyledons.

8. In their variation, or color, ſize, pubeſcence, and age.

CCI.

The laſt part of the plant claiming particular notice is the hybernaculum, or winter lodgement, which defends the young ſhoot or embryo from external injuries; and is divided into,

1. A bulb or large bud produced under ground, and placed on the caudex of certain plants, being diſtinguiſhed into ſeveral ſorts, as ſquamous, ſolid, coated, and cauline.

2. A bud or gem, being the embryo plant, ſeated on the ſtem and branches, covered with ſcales. Of buds, three kinds are enumerated;

That containing only the flower,

That containing only the leaf, and

That containing both flowers and leaves.

Annual plants are only renewed from ſeeds, and buds are confined chiefly to the productions of the cold climates, being unneceſſary in the warmer regions.

CCII.

After this full detail of the different parts of the vegetable ſtructure, thoſe which in particular receive the ſexual appellations are the antheræ and ſtigmata.

1. The antheræ correſpond to the teſtes of the male animal, while the pollen performs the office of the ſemen. This fact is ſupported by a variety of conſiderations; for,

The antheræ precede the fruit, and in their maturity they throw out the pollen, which continues as long as the flower laſts, but decays with the perfection of the fruit.

The antheræ are ſo placed that their pollen may fall on the ſtigmata or female organ.

The antheræ and ſtigmata always flouriſh at the ſame time.

The ſame variety is obſervable in the antheræ, on diſſection, as in the ſeed-veſſels.

The removal of the antheræ before the expanſion of the flowers renders the fruit either abortive, or the ſeeds barren.

The figure of the pollen is equally varied, as that of the ſeeds.

2. That the ſtigmata, again, are the female organ, is ſupported by ſimilar obſervations;

No fruit ever comes to maturity without the aſſiſtance of the ſtigma, for the germen is only a temporary part, and the ſtile is often wanting. The ſtigma, then, is the part receiving the fecundating pollen, as appears from the ſtigmata being ſo ſituated that the pollen may fall upon them, from their correſponding in number to the cells of the pericarpium, from the ſtigmata decaying on the performance of this function, or on impregnation taking place, from their flouriſhing along with the antheræ, and from their removal having the ſame effect, as that of the antheræ, or the deſtruction of the fruit.

CCIII.

Sexual Functions of Vegetables.

From the ſexes of plants forming the foundation of their claſſification, the ſexual functions and parts connected with it claim particular atten-

tion, and the confideration of thefe functions is a proper introduction to the Linnæan Arrangement.

The firft circumftance to be noticed in this view is the mellification of the piftils, which confifts in the fecretion of a melleous juice appearing at the period of puberty, and befmearing the furface of the ftigma. This melleous juice exhibits various appearances in different plants, and tranfudes from all parts of the piftil, filling the whole furface of the ftigma and the cavity of the ftile. It confifts of a mucilaginous faccharine folution, and in many cafes of pure cryftallized fugar.

The prefence of this fecretion is effentially neceffary to the fecundity of the germen; and if dried fo as to be in an unfavorable ftate for the operation, then the germen is not fecundated by the male pollen; for by its vifcofity it carries the pollen through the cavity of the ftile to the germen, or vegetable ovarium.

From the male flowers in general no melleous fecretion is produced, but merely a pollen to impregnate the female.

CCIV.

The Marriage of Plants.

The difcharge, then, of the pollen from the anthera upon the ftigma conftitutes the marriage of plants; and at the age of puberty this is rendered confpicuous, for the mature antheræ fud-

denly break when their pollen is difcharged into the whole ambit or circle of the flower.

The ftigmata at the fame period fwell with a vifcid melleous fluid which receives the difcharged pollen. The antheræ, when the pollen is difcharged, contract, become empty, and decay.

Thus the ftigmata are firft covered with the pollen, then gradually dry, and, like the antheræ and ftamina, decay.

CCV.

The facts that fupport this view of vegetable marriage are;

1. Flowers having only ftamina never feminate.

2. Flowers having only piftils never fecundate, unlefs the pollen is brought to them.

3. If in a tulip the antheræ be taken away, or the ftigma covered during the difcharge of the pollen, the feeds in the germen continue to increafe; but when put into the ground, they do not vegetate, but remain fterile.

4. Monftrous flowers, the ftamina of which form petals, bear fterile feeds; but if fome of the ftamina remain unchanged, then a few feeds only become fruitful.

5. The bilabiated ftigmata of plants, at the age of puberty, are feen to unfold themfelves, and to remain in this ftate for fome days for the pollen; and if the male be not prefent, fo that the pollen has accefs to them, they become marcid.

6. Plants with female flowers alone are never fruitful, unless in the vicinity of a male plant, that the pollen may be sprinkled over it; as in the case of the celebrated palm-tree in the garden of the Royal Academy at Berlin, which flowered and bore fruit for thirty years; but the fruit never ripened, nor did the seeds, when planted, vegetate, (the plant being a female,) till fecundated by a branch from a male; which experiment was successively repeated for two seasons. Many other instances of the same kind are on record.

CCVI.

Fecundation is different in the manner of the operation, according to the situation of the stamina and pistils of the plant.

In hermaphrodite flowers, the discharge of the pollen to the stigma is easy, from the parts of generation being in the same flowers.

In erect flowers, again, the stamina being for the most part very long, and the pistils very short, the exploded pollen easily settles upon the stigma.

In pendulous flowers, the pistils are mostly long, and the stamina very short; thus the pollen discharged from the antheræ falls upon the pistils.

In erect flowers with short stamina and longer pistils, the stile in fecundation curves itself downwards, and offers its stigma to the antheræ for the reception of the pollen; after the operation, the stile is erected.

In erect flowers, whose stamina are placed horizontally, the stamina so erect themselves, that daily one or other of the antheræ copulate with the stigma, and, the explosion of the pollen having taken place, the stamina again return into their natural horizontal situations.

In flowers of the class syngenesia, the stigma passes through the tube coalesced with the anthera; and the discharge of the pollen takes place in the passage.

In monœcious plants, whose stamina and pistils are situated in different flowers of the same plant, and in diœcious plants, whose stamina and pistils are placed in two separate plants, the translation of the pollen to the female flower is trusted to the winds and insects.

Diœcious plants also flourish before the eruption of the leaves, lest they should drive away the pollen from the stigma of the flowers.

Aquatic hermaphrodite plants, at the time of fecundation, erect their flowers above the surface of the water, lest the pollen of the anthera, and the melleous juice of the stigma, be washed away.

CCVII.

The celebration of the connubium in aquatic plants is most singular. At the period of puberty, the female plant erects its flowers above the surface of the water, while the male flowers, of their own accord, are broken from the masculine plants,

and ſwim on the ſurface of the water; the flowers thus open are driven by the winds to the female flowers, and then, but not before, diſcharge the pollen upon them. The impregnation of the flowers being finiſhed, the female impregnated flowers are withdrawn again to the bottom of the water.

In cryptogamia plants the propagation is not to be obſerved, but takes place in the parts of the fructification lying concealed in the leaves.

CCVIII.

The Fecundation of the Seed.

Thus the impregnation of the ſeeds concealed in the germen takes place by means of the pollen of the anthera acting upon them.

The unimpregnated ſeed in the germen contains a peculiar fluid; and each atom of the pollen is alſo furniſhed with a ſimilar prolific vapour.

When it is ſprinkled upon the ſtigma, it is there detained by its viſcous fluid; and, when chemically diſſolved, it gradually deſcends through the veſſels of the ſtile, impregnating the contained ſeeds with the principle of life.

To the fecundation of the ſeeds, it is only neceſſary that the pollen be ſpread over one piſtil, and not the whole; for by deſtroying the whole except one, fecundation of the ſeeds will take place; neither is it neceſſary that the pollen of all the antheræ ſhould be ſpread over the ſtigmata.

Thus nature has provided ſo prodigious a quantity of flowers, and alſo a number of piſtils, in order that the fecundation of the ſeed may never fail.

CCIX.

The Generation of an Hybride Plant.

A plant from an union of two different ſpecies of one genus, is called an hybride; and retains ſome peculiarities from both the parental ſpecies.

Thus if the nicotiana ruſtica, deprived of its ſtamina, has its piſtils ſprinkled with the pollen of the nicotiana paniculata, it produces ſeeds which afford a hybride ſpecies, neither reſembling the ruſtica nor the paniculata, but having ſome of the characters of both.

CCX.

Hybridation ſuceeeds equally well with other plants. Experiments have aſcertained that this phenomenon only takes place between different ſpecies of the ſame genus, but not in different genera of plants. The ſeeds of an hybride plant increaſe like thoſe of another plant, but, when put into the ground, they do not propagate; hence from them no new ſpecies of plants can be produced.

CCXI.

From theſe facts it is of much importance that plants of a different ſpecies, which have the ſame period of floreſcence, ſhould be placed at a diſ-

tance from each other; for by the confuſion or mixture of the pollen, the ſeeds may be rendered unfit for further propagation of that particular kind.

Vegetable monſters may be generated as well as animal ones, the true cauſes of which are unknown.

CCXII.

The Parturition of Plants.

The ſpontaneous delapſe of the ſeed from the plant is termed vegetable parturition.

As ſoon as the ſeeds are perfected and matured, the pericarpia burſt, and they eſcape.

The peduncles of fruits, when the ſeeds are matured, become dry, that the fruit, by the circumſtances of its own weight, of the ſlighteſt agitation, or of the wind, may fall from the tree.

The very frequent vegetable abortions, both in the form of flowers and immature fruits, ſeem to be directed by the economy of the plant; for ſome fructiferous trees produce a ſtupendous quantity of flowers, the exceſs of which it is neceſſary to remove, or that many of them ſhould fall and be deſtroyed by the wind, cold, dryneſs, inſects, ſhowers, &c. before their advance to maturity, leſt the boughs of the tree be broken by their weight, or the tree too much exhauſted of its nutritious juices.

The number of ſeeds which ſome plants naturally yield is beyond all conception, to the

extent of 3,000, 4,000, and even 30,000 and 40,000.

The feeds, thus matured, are fpread on the furface of the earth, either by the elafticity of their own capfules, when they fly of their own accord; or they faften to other fubftances by a peculiar apparatus; or are fwallowed and not digefted, but depofited with the excrement of the animal.

The feed, thus depofited in the earth, evolves at the proper feafon, when the ftimuli neceffary to vegetation are prefent, into its primordial parts; the nutritious juice is attracted from the earth by the abforbing veffels, and the pulp of the feed fwells, ruptures, and gradually throws off its arillus.

The power of vegetation, thus excited to action, expands the feminal pulp into the cotyledons; they, like the placenta of animals, prepare a nutritious juice for the nutrition of the other parts.

Next, the fame power fhoots upwards into the plumule, which conftitutes the ftem, and downwards into the roftel, which is prolonged, partly into the root and partly into the bafis of the ftem, elevating the cotyledons without the earth.

Thus the developement of the plant, as formerly detailed, commences, and continues to proceed in the manner already pointed out.

CCXIII.

Having thus ftated the manner of the fecunda-

tion of vegetables, according to the moſt approved (or Linnæan) opinion, which proceeds on the idea of a diſtinction of claſſes in the vegetable, as well as in the animal kingdom; in order to render this opinion ſtill clearer and more ſatisfactory, it will be proper to purſue the analogy between the vegetable and animal ſyſtem as the foundation on which it is raiſed.

CCXIV.

Analogy of Vegetables and Animals.

In all their leading principles, both of ſtructure and economy, we find the vegetable and animal agree.

CCXV.

General Principles of both.

Thus they are both compoſed of three eſſential parts, ſolids, fluids, and a vital principle.

Of theſe parts alſo, the barks and leaves of plants are to the vegetable what the hard and ſoft parts are to the animal.

Likewiſe the chyme, chyle, ſap, and the ſecreted juices of the plant, are to it what the chyme, chyle, blood, and the fluids ſeparated from it, are to the animal.

In both alſo, the vital principle is of the ſame nature, and ſeems to be governed by ſomewhat ſimilar laws.

Plants at the ſame time, like animals, are both oviparous and viviparous.

CCXVI.

First Appearances of both.

In entering next into the more ſeparate parts of the vegetable and animal ſtructure, we find,

That the gluten in the cotyledon of the ſeed is to the vegetable the ſame as the gelatin in the egg is to the animal.

That the vaſcular ſtructure of the cotyledon of the ſeed anſwers the ſame end as that of the cotyledons and placentæ of animals.

That both the ſeed and egg unfold their reſpective productions by a developement of pre-exiſting parts.

That the root of the plant and the inteſtines of the animal perform to each the ſame office.

That the ſeed of the vegetable and the egg of animal likewiſe agree.

And that the bud in the vegetable is the fœtus in the animal.

Proceeding in the ſame analogy, the bark of a tree may be regarded to the bud what the uterus of the animal is to the fœtus.

And inoſculations of the veſſels of the bud with the trunk of the tree are ſimilar to thoſe of the placenta and cotyledons with the uterus of the animals.

The protruſion of the bud through the bark of the tree is the birth of the plant, and is vegetable

labour, ſimilar to the expulſion of the fœtus from the uterus in the animal.

CCXVII.

Mode of the Nutrition of both.

In reſpect to the mode of nouriſhment, the analogy between the two kingdoms is ſtill farther confirmed, for both are nouriſhed by a ſimilar ſet of veſſels.

Thus the ſuccous vegetable veſſels are ſimilar to the blood-veſſels in the animal.

The vegetable leaves agree alſo with the lungs.

From the common maſs of fluids, both in vegetables and animals, or from the ſap and blood, proper or peculiar juices or ſecretions are ſeparated.

Thus the vegetable ſap and animal blood agree, and the motion of the vegetable ſap is ſimilar to the circulation of the animal blood.

CCXVIII.

Progreſs of the Growth in both.

In regard to the progreſs of growth, the individuals of both kingdoms are produced from pre-exiſting parts; and the growth of each depends on a ſimilar extenſion of their fibres, which, when attaining a certain preſcribed degree of ultimate ſize, ceaſes to increaſe. Thus in the ſeed or bud there is concealed every part of the plant, as in the ovum every part of the fœtus.

CCXIX.

Fecundation in both.

On the principle of fecundation a fimilar analogy is not lefs readily difcernible, for the fubtile vapour of the pollen is to the vegetable what the fpermatic aura is to the animal; while the male parts of the vegetable flower refemble, in their office, the male parts of the animal.

In the fame manner the veffels of the filament of the plant, like thofe of the teftes of the animal, ferve to prepare the prolific vapour; while the vegetable antheræ are compared to the veficulæ feminales of the animal; and the piftil is fimilar in its effect to the animal uterus and ovarium; the germen is to the vegetable what the ovarium is to the animal.

Thus, in the bud, the pericarpium and uterus ferve fimilar purpofes, and bring the embryo to perfection.

CCXX.

Death of both.

In conclufion, we find that the death of a plant is of a fimilar nature to that of an animal, and that both are equally fubject to this change; while their functions in life are equally dependent upon an irritable principle; and this, again, in both is dependent upon their vitality.

That the ceffation of the action of the vital principle in both conftitutes death, which renders

them no longer ſubject to the laws of vital affinity; but, on the contrary, the laws of chemical affinity predominate, by which their organic ſtructure is loſt, while their elements become equally in both the ſource of new productions.

CCXXI.

Linnæan Arrangement.

With this knowledge of the Linnæan nomenclature, we are now prepared for entering on the arrangement of plants; and this arrangement has been formed into 24 claſſes. To underſtand the formation of theſe, it is to be remembered that the ſtamina of the flowers are the male parts of generation; that the piſtils are the female parts, and that the plants that contain both theſe parts are of the hermaphrodite kind. The annexed Table exhibits the mode of claſſification founded on this opinion.

CCXXII.

Claſſes.

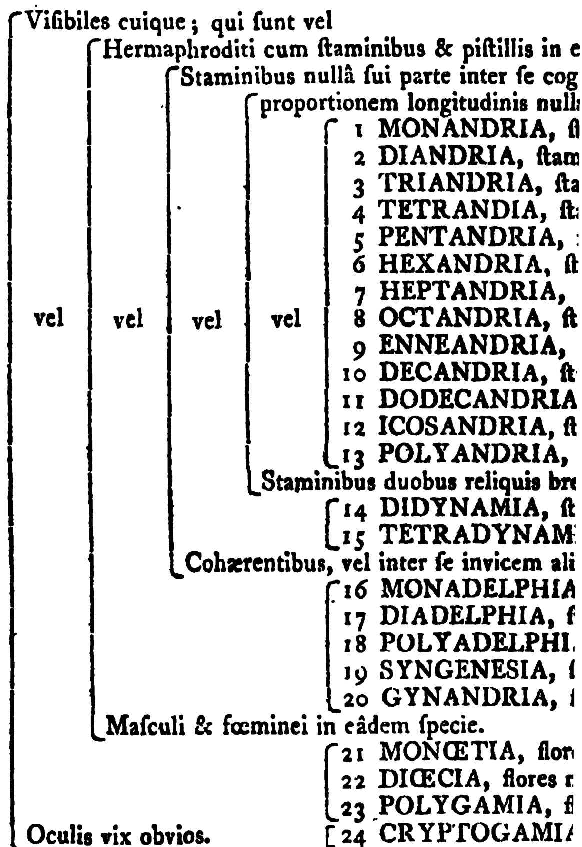
Theſe twenty-four claſſes thus exhibited comprehend every known genus and ſpecies of plants. The firſt eleven claſſes are ſimple in their characters, which all depend on the number of the male parts.

Of the particular claſſes after this, the 11*th* includes ſuch plants as are furniſhed with any number of ſtamina from eleven to nineteen.

The 12*th* claſs furniſhes the fruits moſt in

C L A V

Plantæ proferunt Flores,


Viſibiles cuique; qui ſunt vel
Hermaphroditi cum ſtaminibus & piſtillis in e
Staminibus nullâ ſui parte inter ſe cog
proportionem longitudinis null
1 MONANDRIA, ſ
2 DIANDRIA, ſtam
3 TRIANDRIA, ſta
4 TETRANDIA, ſt
5 PENTANDRIA,
6 HEXANDRIA, ſt
7 HEPTANDRIA,
8 OCTANDRIA, ſt
9 ENNEANDRIA,
10 DECANDRIA, ſt
11 DODECANDRIA
12 ICOSANDRIA, ſt
13 POLYANDRIA,
vel vel vel vel
Staminibus duobus reliquis bre
14 DIDYNAMIA, ſt
15 TETRADYNAM
Cohærentibus, vel inter ſe invicem ali
16 MONADELPHIA
17 DIADELPHIA, ſ
18 POLYADELPHI
19 SYNGENESIA, ſ
20 GYNANDRIA, ſ
Maſculi & fœminei in eâdem ſpecie.
21 MONŒTIA, flor
22 DIŒCIA, flores r
23 POLYGAMIA, ſ
Oculis vix obvios.
24 CRYPTOGAMI

Ordines plerumque à fœminis
Monogynia, Digynia, Trigyn
Numerus fœminarum deſumit

(*To face p.* 162, *Vol. IV.*)

eſteem; and, as the number of ſtamina is not limited; an attention muſt be paid to the other parts of the character of this claſs, to diſtinguiſh the individuals of it from the claſs Polyandria.

The 13*th* claſs has its fruits often of a poiſonous nature; which makes it neceſſary to diſtinguiſh it carefully from the 12*th* claſs.

The 14*th* claſs, though, like the 4*th*, it has the ſame number of ſtamina; yet two of theſe are uniformly much ſhorter than the other two, while each particular ſtamen belonging to the different parts ſtands directly oppoſite to one another.

The 15*th* claſs reſembles the 6*th* in the number of ſtamina; but here four of the ſtamina are uniformly longer than the other two, which laſt are always oppoſite to each other.

Between the other claſſes there is no danger of making miſtakes with any of the preceding ones.

CCXXIII.

Orders.

The orders, or 1*ſt* diviſion, of the claſſes in the firſt thirteen, are taken from the piſtils or female parts, as the claſſes themſelves are from the ſtamina; as monogynia, digynia, trigynia, &c. When the piſtils have no ſtalk or filament like the ſtamina, they are numbered by the ſtigmata, which, in this caſe, adhere to the capſule in the form of ſmall protuberances.

In the 14*th* claſs, the mode of forming the

orders is different. It confifts of plants having their feeds inclofed in a capfule, or altogether uncovered. Hence they are divided into the naked feeded plants (gymnofpermia); and the covered ones (angiofpermia).

The orders of the four next claffes are taken from the number of their ftamina, and therefore termed monadelphia, pentandria, decandria, &c.

The 19*th* clafs confifts of plants having a compound of fmall flowers in one calyx; and is accordingly divided, from the variety in thofe flowers, into polygamia, æqualis, fpuria, &c.

The orders of the 21*ft* clafs are taken from the number of ftamina, and alfo from the names and characters peculiar to fome of the other claffes, as monœcia, triandria, &c.

The orders of the 23*d* are all taken from claffical characters, as polygamia, monœcia, &c.

The 24*th* clafs is an irregular one, comprehending the four orders of filices, mufci, algæ, and fungi.

The genera, or fubdivifions of the claffes and orders, are taken from the parts of fructification alone. All vegetables that agree in their parts of fructification, are to be put together under one genus; and all fuch as differ, are to be divided. The characteriftic mark of each genus is to be fixed from the number, figure, proportion, and fituation of all the parts; and as there are few

genera in which all the parts are conſtant in every one of the ſpecies, ſome ſingle circumſtance that is conſtant ſhould be fixed on as the eſſential character.

CCXXIV.

With theſe general remarks on the claſſes, orders, and genera, we enter upon the conſideration of the different medical articles in modern practice contained in each.

CCXXV.

In detailing them, the method adopted is a ſhort deſcription of the article, and its effects on the organs of taſte and ſmell; the principles of its virtues; the morbid ſtates to which it is applied; and the general forms of its exhibition.

CCXXVI.

CLASS. I. MONANDRIA.

The firſt claſs, or Monandria, conſiſts of ſuch plants as bear hermaphrodite flowers, furniſhed with but one ſtamen, and conſiſts of two orders.

CCXXVII.

1. Monogynia, comprehending ſuch plants as have but one ſtile; the individuals of which at preſent employed in medicine are;

CCXXVIII.

Scitamineæ inferæ Tractu loculari infero.

Amomum.

Corolla 3-partita; labio ovato

Zinziber, a perennial plant from the Eaſt Indies, the root of which is only uſed, and diſ-

tinguiſhed into the brown and white kind, conveying an acrid aromatic hot impreſſion, with an agreeable ſubfragrant ſmell.

Its qualities reſide in a volatile oil, and a ſmall proportion of the reſinous principle.

In its nature it is warming, ſtomachic, and ſialogue.

In practice it is employed againſt dyſpepſia, flatulence of the primæ viæ, with or without diarrhæa; externally, in relaxation of parts of the mouth, particularly the uvula.

It is uſed in four forms of powder, candy, ſyrup, and tincture. The doſe of the firſt, from 5 gr. to 30; of the ſecond, from 1 ſcruple to half a ſcruple; of the third, from half a dram to half an ounce, and of the third from 1 to 2 drams.

CCXXIX.

Cardamomum.

This plant, the ſeeds of which are employed, is the product of the Eaſt Indies. The leſſer cardamom is preferred, and the ſeeds convey an acrid hot aromatic taſte, with an agreeable fragrant odor.

Their virtues reſide in a volatile oil, and they prove warming and ſtimulant, but with leſs tendency to heat than the former article.

In practice, they are preſcribed in dyſpepſia, in flatulence, and in chloroſis from a phlegmatic cauſe.

They are exhibited in the form of powder and tincture; from 10 to 30 grs. of the former, and from one to two drams of the latter.

CCXXX.

Granum Paradisi.

This perennial plant, brought from Guinea and Madagascar, has its seeds only employed, which are contained in its fig-like fruit. They possess a hot pungent taste like pepper, with a more aromatic flavor than the former.

Their virtues reside in a resinous principle more than in a volatile oil.

They are employed in the same morbid situations as the former.

They are exhibited also more in powder than in any other form.

CCXXXI.

Costus Arabicus.

Cor. ringens; labio 3-fido; media emarginata.

The root and bark of this tree, the product of the East and West Indies, possesses a bitter aromatic taste, with a fragrant odor, which even impregnates the urine with a violent smell.

Its qualities reside in a bitter extract and volatile oil.

It is stimulant, warming, and emmenagogue.

It is used in all morbid cases where a permanent stimulant and tonic is required.

It is exhibited in powder or infusion; in the former, in a dose of 1 scruple; in the latter, in 1 scruple to 1 lb. of fluid.

CCXXXII.

Maranta Galanga (Galangal).

Cor. 5-partita, ringens; labio 2-partito magno.

This is the root of an East India tree, and chiefly brought from China in small pieces. It conveys a bitterish hot biting taste like pepper, with an aromatic smell.

The principle of its action is a resin more than an essential oil.

It is stimulant, calisacient, stomachic, and emmenagogue. In its recent state it is an errhine.

It is employed in dyspepsia, in lingual palsy, in flatulent cholic, and in lochial pains; as also in sea-sickness, hiccup, and vertigo; externally, it is an application to herpes.

It is exhibited in powder from 10 to 15 grs.; and is also used in tincture.

CCXXXIII.

Curcuma Longa (Turmeric).

Cor. 4-partita; labio ovato. Stam. 4 sterilia.

This is an East India root, of a bitter and somewhat aromatic taste, tinges even the urine of a saffron colour, and is of an agreeable weak smell.

Its qualities reside in an extractive principle, with a small portion of volatile oil.

Its virtues are emmenagogue, diuretic, and deobſtruent. It is alſo a ſtrong die.

It is employed in intermittent fevers, in abdominal obeſity, jaundice, and cutaneous diſeaſes.

It is exhibited in the form of powder from 2 ſcruples to a dram; and in infuſion, from 2 drams to 1 lb. of fluid.

CCXXXIV.

Kemferia Rotunda, (*Zedoary*).

Cor. 6 partita; labio 2-partito magno.

The root of this plant, which only is uſed, is brought from the Eaſt Indies. It conveys to the taſte a warm bitteriſh aromatic impreſſion, with an agreeable fragrant ſmell.

Its principle reſides in a volatile oil.

Its virtues are ſtimulant, calefacient, ſtomachic, and anthelminthic.

It is employed in dyſpepſia, in pyroſis, in intermittent fevers, in diſeaſes from relaxation or atony, and in worms.

It is exhibited in powder in doſes of 1 ſcruple, and alſo in water, ſpirit, and tincture.

The medical articles of this claſs belong all to this firſt order, and none to the ſecond, or *Digynia*, which comprehends ſuch plants as have two ſtiles.

CCXXXV.

Class II. Diandria.

This claſs conſiſts of ſuch plants as bear herma-

phrodite flowers furniſhed with two ſtamina; and it is divided into three orders:

CCXXXVI.

1. Monogynia, comprehending ſuch plants as have but one ſtile, the medical articles of which are;

CCXXXVII.

Flores Inferi, Monopetali, regulares.

Jaſminum Officinale (Common White Jaſſmine).

Cor. 5-fida. Bacca dicocco.

The flowers of this tree are the part uſed, which poſſeſs a highly fragrant odor.

Their qualities are narcotic and ſedative.

They are not exhibited in any morbid ſtate. A fragrant oil is prepared from them by infuſion.

CCXXXVIII.

Olea Europæa (Common European Olive).

Cor. 4-fida. Drupa.

The fruit of this tree, which grows in the South of France, Spain, Portugal, &c. is the part uſed. This fruit has an acrid bitter taſte, but affords the expreſſed oil, which has no particular taſte or ſmell.

Its quality lies in its oleous nature; and it is employed as an emollient lubricating fluid, both externally and internally, in dyſentery, teneſmus, cough, ſtrangury, inflammation of the bowels, bites, &c. Of late it has been recommended as of uſe in the plague, applied warm by external friction to the whole ſurface till a ſweat is produced.

CCXXXIX.

Fl. Inferi, Monopetali, irregularis Fructûs, capsulares.

Veronica Officinalis (Officinal Speedwell).

Cor. 4-partito limbo; lacinia inferiore angustiore.

This plant, the production of dry woody places, possesses a bitter and somewhat styptic taste.

Its virtues are those of a mild astringent and expectorant.

It is employed in cough, consumption, pituitous affections of the breast, and in vitiated habits.

Its forms are those of powder or decoction.

CCXL.

Buccabunga (Brooklime Speedwell).

This perennial plant is used in its recent state. It imparts a somewhat insipid inodorous taste. It is exhibited at times in the scurvy.

CCXLI.

Gratiola Officinalis (Hedge Hyssop).

Cor. 4-fida, irregularis. Stam. 4; 2 sterilia.

This is a small perennial plant in moist grounds, the leaves of which possess an intensely bitter nauseous taste, with a similar smell.

Its qualities reside in an extractive principle.

Its properties are emetic, cathartic, and anthelmintic.

It is employed in madness, ascitic dropsy, worms, lues, and phagedenic ulcers.

I 2

It is exhibited in powder from 10 to 15 grs. twice or thrice a day, and in infuſion from 3 drams to 1 lb. of fluid.

CCXLII.

Flores Inferi, Monopetali, irregularis Fructûs, gymnoſpermi.

Verbena Officinalis (*Officinal Vervain*).

Cor. ſubæqualis. Cal. laciniâ ſuprema breviore.

This annual plant is inodorous, and ſomewhat inſipid to the taſte. In its qualities it is ſlightly aſtringent. It is applied in the ſcrofulous opththalmy of infants.

CCLXIII.

Monorda Fiſtuloſa (*Purple Monorda*).

Cor. ringens; galeâ lineari obvolvente genitalia.

This perennial plant is a native of Canada. It poſſeſſes an aromatic bitter taſte, with a fragrant odor. Its virtues are thoſe of a nervine, ſtomachic, and deobſtruent. It is employed in intermittent fevers in the form of infuſion.

CCXLIV.

Roſmarinus Officinalis (*Common Roſemary*).

Cor. ringens; galea falcata; ſtam. curva.

This plant, chiefly a native of Spain, Italy, and the South of France, poſſeſſes an aromatic warm taſte with a fragrant odor. The leaves and tops of the flowers are the parts uſed.

Its virtues reſide in a volatile oil.

It is ſtimulant, nervine, antiſpaſmodic, emmenagogue, ſtomachic, and externally diſcutient.

It is employed in dyſpepſia, chloroſis, hyſterics, tertian fever, and in nervous weakneſs. It is beſt in infuſion, though a diſtilled water, ſpirit, and oil, are prepared from it.

CCXLV.

Salvia (Sage).

Cor ringens; filamenta tranſverſe pedicellata.

Salvia Hortenſis (Garden Sage).

This plant conveys a bitter (ſomewhat ſtyptic) taſte, with a ſtrong fragrant ſmell.

Its principle reſides in a volatile oil and an aſtringent extractive matter.

Its qualities are that of a nervine, ſtomachic, and emmenagogue; externally, it is diſcutient.

It is employed in the form of a ſpiritous infuſion in lacteal tumors of the breaſt, in a watery infuſion or gargle, in mucous cynanche and relaxation of the gums. It is uſed alſo in leucophlegmaſia.

CCXLVI.

Salvia Horminum (Purple Red-topped Sage).

This plant, the ſeeds of which are the part employed, poſſeſſes a bitteriſh mucilaginous taſte, with a fragrant ſmell.

It has been exhibited in ſome ſpecies of ophthalmia.

CCXLVII.

Salvia Sclarea (*Common Clary*).

This is a biennial plant growing in certain parts of Germany. It poſſeſſes a fragrant ſmell, with the ſame virtues as the common ſage, but in a higher degree. Hence it is exhibited in leucórrhœa, colic, and hyſteria.

CCXLVIII.

Collinſonia Canadenſis (*Nettle-leaved Collinſonia*).

Cor. ſubringens; labio capillari, multifido.

This is a perennial plant of North America, can growth the root of which only is uſed. It poſſeſſes an odorous ſmell, and has been employed in the lochial colic of women.

CCXLIX.

2. The 2*d* order of this claſs comprehends ſuch plants as have two ſtiles, but none of them claim attention for their medical qualities.

CCL.

3. Of the 3*d* order, or trigynia, conſiſting of thoſe plants that have three ſtiles, there is but one genus, viz.

CCLI.

Piper (*Pepper*).

Cal. o. Cor. o. Bacc. 1-ſparma.

Nigrum (*Black*).

This is the fruit of a plant growing in Java and Malabar; which, when ripe, and deprived of its

ſkin, appears white. It impreſſes an acrid aromatic hot taſte.

Its virtue reſides in a reſinous principle, and the aromatic odor in an eſſential oil.

Its powers are ſtimulant, calefacient, and ſtomachic. It is uſed as an errhine, and againſt vermine.

The morbid ſtates to which it has been chiefly applied internally are, intermittent fevers, dyſpepſia, and hiccup; externally, in relaxation of the uvula, and againſt crab-lice.

CCLII.

Longum (*Long Pepper*).

This plant grows in the ſame ſituation as the former, and is hotter and ſtronger.

CCLIII.

Cubeba (*Cubebs*).

This is alſo the dried fruit of an Eaſt India plant. It has an acrid aromatic hot taſte.

Its virtues are ſtimulant, calefacient, carminative, and ſialogogue.

It is employed in vertigo and moroſe caſes.

CLIV.

CLASS III. TRIANDRIA.

This claſs conſiſts of ſuch plants as bear hermaphrodite flowers furniſhed with three ſtamina. The orders are three:

CCLV.

1. Monogynia, comprehending ſuch plants as have but one ſtile, the medical individuals of which are;

CCLVI.

Flores Superi.

Valeriana (*Valerian*).

Cor. 5-fida, baſi gibba. Sem unicum.

Officinalis (*Officinal or Wild Valerian*).

This perennial plant, the root of which only is uſed, grows in moiſt grounds and woods. It poſſeſſes a ſtrong ſmell of an aromatic fœtid kind, with a bitteriſh, ſubacrid, and warm taſte.

Its virtue reſides in its volatile oil. It is powerfully antiſpaſmodic, narcotic, anthelminthic, emmenagogue, and diuretic.

It is employed againſt epilepſy, hyſteria, convulſion, hypochondriaſis, headach, incipient amauroſis, amenorrhæa, worms, hemoptyſis, and ulcers.

It is exhibited in the forms of powder in a doſe of 1 ſcruple to a ſcruple and a half, repeated in the day; in infuſion, in 2 ounces to 1 lb. of fluid; and in tincture, to half a dram for a doſe.

CCLVII.

Phu (*Garden Valerian*).

This differs only from the former in its weaker powers.

CCLVIII.

Celtica (*Celtic*).

This perennial plant grows on the higher moun-

tains in the South of Europe. It poſſeſſes an acrid bitteriſh aromatic taſte, with a fragrant ſmell. Its virtues are thoſe of an antiſpaſmodic, diuretic, and anthelminthic. It is chiefly uſed in Turkey for the baths.

CCLIX.

Flores Inferi.

Tamarindus (*Tamarind*).

Cor. 3-petaloidea Cal. 4-partitus ligum. ſucculentum.

The fruit of this Indian tree is the part uſed. It poſſeſſes a ſtrong acid taſte, and its virtues reſide in an acid and ſaccharo-mucilaginous extract. Its property is that of proving laxative and refrigerant. It is exhibited in the form of decoction or whey in inflammatory and bilious fevers, in jaundice, and in dyſentery.

The doſes of theſe forms are from 2 ounces to 1lb. Of the pulp itſelf, as a laxative, 2 or 3 drams may be taken to an ounce or more.

CCLX.

Crocus (*Saffron*).

Cor. 6-petaloidea, erecta, patula, ſtigmata convoluta colorata.

This plant, the ſtigmata of which are only uſed, is produced in the Southern parts of Europe as well as in our own gardens. It poſſeſſes a ſomewhat aromatic taſte, with a fragrant ſmell. Its properties are that of a ſedative, hipnotic, gentle ſtimulant, antiſpaſmodic, and emmenagogue.

It is exhibited in alenic amenorrhæa, in lochial pains, in baſtard peripneumony, and vomiting. It is alſo an external application in ophthalmia.

It is employed in the forms of powder from 10 to 30 grs.; in extract, in 10 to 15 grs.; and in tincture, in half a dram or more.

CCLXI.

Iris (Iris).

Cor. 6-petaloidea, pet. alternis reflexis, ſtigma petaloideum.

Florentina (Florentine.)

The roots of the florentine iris, the part of this perennial plant uſed, have a bitter acrid nauſeous taſte, which is leſſened by drying, with a fragrant violet ſmell. Their virtue reſides in an acrid corroſive matter.

The property of the root, in its recent ſtate, is to prove cathartic, diuretic, and expectorant. It is uſed alſo as an errhine.

CCLXII.

Iris Fœtida (Fœtid Iris, or Goodwyn).

The thick root of this plant has a bitter diſagreeable taſte, with a ſtinking ſmell. It proves deobſtruent, diuretic, narcotic, antiſpaſmodic, and cathartic. It is employed in hyſteria, ſcrofula, and dropſy. Its doſe is half an ounce.

CCLXIII.

Iris Germanica (German Iris).

The root of this ſpecies, when recent, poſſeſſes an acrid bitter nauſeous taſte.

Its quality reſides in a volatile acrid matter. It proves in its freſh ſtate gently emetic, diuretic, acts as an errhine, is expectorant, and emmenagogue.

CCLXIV.

Iris Pſeudacoſus (Yellow Water-Flag).

The root of this ſpecies is inodorous, but poſſeſſes an acrid and ſomewhat ſtyptic taſte. It is uſed in the form of the expreſſed juice as a diuretic and cathartic in the doſe of 1 dram, and the root again proves aſtringent. The former is employed in dropſy, the latter in ſcurvy.

CCLXV.

Gladiolus Communis (Corn Flag).

Cor. 6-petaloidea, pet. ſuperioribus, 3-convergentibus.

The root of this plant has been recommended as an aphrodiſiac.

CCLXVI.

Flores Graminei valvales Glumæ Calycinæ.

Cyperus (Cypreſs).

Cor. nulla, calc. paleis diſtichis, ſem. nudum.

Longus (Long).

The root of this tree poſſeſſes a pleaſing aromatic warm taſte, with a fragrant ſmell. It proves diuretic and emmenagogue, and has been uſed in ulcers of the bladder, womb, and mouth.

CCLXVII.

Rotundus (Round).

This ſpecies agrees with the former, but its powers are weaker.

CCLVIII.

2. Digynia, which comprehends ſuch plants as have two ſtiles, the medical articles of which are:

CCLXIX.

Flores Uniflori Vagi.

Saccharum Officinarum (Sugar Cane).

Cal. lanugine, extus veſtitus.

This perennial plant, the expreſſed juice of which is inſpiſſated and cryſtallized, grows both in the Eaſt and Weſt Indies, and in Egypt. It poſſeſſes an agreeable ſweet ſaline taſte. Its qualities are ſtimulant, antiſeptic, and nutrient.

It is exhibited in hoarſeneſs and cough. Externally, it is employed in powder againſt ſpecks of the eye.

It is prepared in the form of ſimple ſyrup in the diſtilled ſpirit named rum, in the oxalic acid, and it is a univerſal ingredient in all conſerves and ſyrups.

CCLXX.

Flores Multiflori Vagi.

Avena Sativa (Oats).

Cal. 2-valvis, cor. oblonga valvis, dorſo ariſta contorto.

The decorticated ſeeds and flour of this plant is an article of great uſe in diet. It is of an inſipid farinaceous nature. Its qualities are demulcent, emollient, and highly nutrient. It is uſed in the form of decoction and cataplaſm.

CCLXXI.

Dactylis Glomerata Spicata receptaculo subulato.
Secale Cereale (Rye).

Cal. biflorus.

The flour of the seeds makes a useful bread, and in a state of fermentation it is employed in sinapisms.

CCLXXII.

Hordium Distichon (Barley).

Involucr. hexaphyllum triflorum, flos simplex.

The seeds of this grain are used in three states, of barley, pearl barley, and malt. They are all mucilaginous and farinaceous, and possess a stimulant, emollient, and nourishing quality. The decoction of malt is employed in scurvy.

The three preparations of this grain are, beer, alcohol, and vinegar, or rather alegar.

CCLXXIII.

Triticum (Wheat.)

Cal. multiflorus.

Triticum Hybernum.

The seeds of this plant are used in three states, of flour, starch, and bran. It consists of a farinaceous mucilaginous insipid nature. It possesses an emollient nourishing quality, with a tendency to arcescency. The flour is used in cataplasms; the starch in glysters for dysentery, tenesmus, and strangury; and the decoction of the bran in cough; externally, in baths.

CCLXXIV.

Triticum Repens (Quick-Grafs).

The root of this perennial plant is the part ufed, which poffeffes a dulcefcent inodorous nature, and a diuretic, deobftruent quality. It is employed in abdominal fullnefs, in intermittent fevers, and in jaundice. In the form of decoction or extract, 2 ounces are proper in the former, to 2 lb. of fluid.

CCLXXV.

CLASS. IV. TETRANDRIA.

This clafs confifts of fuch plants as bear hermaphrodite flowers furnifhed with four ftamina, the ftamina being of equal lengths; a neceffary diftinction from the 14th clafs. The orders of this clafs are three:

CCLXXVI.

1. Monogynia comprehends fuch plants of it as have but one ftile, the medical articles of which are;

CCLXXVII.

Flores Monopetali dicocci Superi ftellati.

Afperula Odorata (Sweet-fcented Woodroof).

Cor tubulofa, fructus fubglobofi.

This perennial plant grows in woods. When dried, it poffeffes a fragrant odor, which it communicates to its infufion, the form in which it is employed, its operation being as a diuretic.

CCLXXVIII.

Galium (Ladies'-Bed-Straw).

Cor. plana, fructus fubglobofi.

Galium Verum (Yellow Ladies'-Bed-Straw).

This plant poffeffes a fragrant fmell and aftringent tafte. It has alfo the peculiar quality of coagulating milk. It is employed in epilepfy, bloody urine, and hyfteria.

CCLXXIX.

Galium Aparine (Goofe-Grafs).

The expreffed juice is the part of this plant employed. The plant itfelf poffeffes an aftringent tafte. It is employed in fcrofula and cutaneous difeafes.

Four ounces of the expreffed juice are exhibited twice a day.

CCLXXX.

Rubia Tinctorum (Madder).

Cor. campanulata, fructus baccati.

The root of this plant is the part ufed, the virtue of which refides in an aftringent extract, red, and of a bitter fweetifh tafte.

Its quality is that of an aftringent, tonic, and diuretic, difplaying the peculiarity of reddening the urine and bones.

It is employed in baftard peripneumony, pituitous difeafes of the lungs, and alfo in affections of the liver, in rickets, in abdominal fullnefs, in jaundice, and amenorrhæa.

It is exhibited in ſubſtance to the extent of half a dram ſeveral times a day; and in decoction, in the proportion of 1 ounce to 3 lbs. of fluid, uſing 1 lb. daily.

CCLXXXI.

Flores Monopetali, Monocarpi, Inferi.

Penæa Sarcocolla (*Sarcocolla*).

Cor. campanulata. Cal. 2-phyllus, cap. 4-locularis, 4-valvis.

The concrete juice of this plant, brought from Ethiopia, is the part uſed.

Its taſte is bitter, accompanied with a dull kind of ſweetneſs, without any ſmell.

It is reckoned ſtimulant and cathartic, and has been chiefly celebrated as an external application for the agglutination of ulcers.

CCLXXXII.

Plantago (*Plaintain*).

Cor. refracta. Cal. 4-partitus, cap. 2-locularis, circumſciſſa.

Major (*Greater*).

Every part of this plant is uſed. It poſſeſſes an inſipid and ſomewhat ſtyptic taſte.

Its quality is ſomewhat aſtringent. It is employed in the tertian intermittent, and in external ulcerations.

CCLXXXIII.

Plantago Pſyllum (*Clammy Plaintain*).

This ſpecies poſſeſſes a mucilaginous quality,

and is of an obtending demulcent nature. It is employed againſt hoarſeneſs and opthalmia.

CCLXXXIV.

Flores Monopetali Monocarpi Superi.

Sanguiſorba Officinalis (Common Burnet Saxifrage).

Cor plana. Cal. 2-pyllus, cap. 4-gona inter calycem et corollam.

The root of this plant is the part uſed. It poſſeſſes a ſtyptic taſte. Its quality is that of an aſtringent and tonic. It is employed in hemorrhage, particularly towards the end of dyſentery.

CCLXXXV.

Bankſica Abyſſinica.

The flowers of this plant are the part uſed. It is the product of Abyſſinia. Its virtues are thoſe of an anthelminthic. It is employed in infuſion againſt the aſcarides, a handful of the flowers being digeſted in four pints of beer for 12 hours before uſe.

CCLXXXVI.

Flores Incompleti Inferi.

Doryſtenica Controyerva (Controyerva).

Cal. receptac. planum carnoſum commune.

The root of this plant, the part uſed, poſſeſſes a peculiar aromatic ſmell, and ſomewhat aſtringent warm bitter taſte, with a light ſweetiſh kind of acrimony.

The virtues of this root are much extolled as

an aſtringent, antiſeptic, ſudorific, ſtomachic, and ſtimulant.

It is employed in fevers and eruptive diſeaſes of an atonic nature, as alſo in dyſentery.

Its forms are, its powder from 10 grs. to 1 dram; and its tincture, from 1 to 2 drams.

CCLXXXVII.

Camphoroſma Monſpelienſis (*Hairy Camphoroſme*).

This plant poſſeſſes an aromatic quality. Its virtues are nervine, ſudorific, and reſolvent. It is employed againſt hyſteria, leucorrhæa, aſthma, chronic rheumatiſm, and coryza.

CCLXXXVIII.

Fl. Tetrapetali Superi.

Santolum Album (*Yellow Sanders*).

Cor. 4-petala calyci innata bacca, 1-ſperma.

The interior part of the wood of this Oriental tree, the part uſed, is of a pleaſant ſmell, with a bitteriſh aromatic taſte and an agreeable pungency.

The virtue of this wood reſides in a volatile oil and reſinous principle. It is ſtimulant and ſudorific, and employed againſt rheumatiſm.

CCLXXXIX.

Alchemilla Vulgaris (*Common Ladies Mouth.*

Cal. 8-fidus. Sem. 1. calyce incluſum.

The leaves and root of this plant, the parts uſed, diſcover to the taſte a moderate aſtringency.

Hence they have been recommended in female diſcharges, and in alvine fluxes of a paſſive nature.

CCXC.

2. Digynia, the 2*d* order of this claſs, comprehends ſuch plants as have two ſtiles.

CCXCI.

Curſuta Europæa.

Cor. 4-fida ovata. Cal. 4-filus.
Capſ. 2-locularis circumſciſſa.

The quality of this production is that of an inodorous bitter ſubacrid plant, poſſeſſing a deobſtruent virtue, which has been accordingly tried in intermittent fever and abdominal fullneſs.

CCXCII.

3. Tetragynia, the 3*d* order, comprehends ſuch plants as have four ſtiles.

CCXCIII.

Ilex (*Holly*).

Cor. 1-petola. Cal. 4-dentatus
bacca, 4-ſperma.

Ilex Aquifolium (*Common Holly*).

The leaves of the holly are the part uſed. They poſſeſs a mucilaginous bitter ſtyptic taſte. Their virtue reſides in a bitter aſtringent principle. Their qualities are thoſe of an aſtringent tonic, and antiſeptic. They are chiefly exhibited in the form of decoction, from 1 ounce of the leaves to 1 lb. of fluid; and they are given in ſtiffneſs of joints after gout, in obſtinate intermittents, and in dyſpepſia.

CCXCIV.

Ilex Caſſine (Daboon Holly).

The leaves of this tree are of a bitter and ſomewhat aromatic taſte. Their virtues are ſtomachic, ſtimulant, and expectorant; in their recent ſtate they prove even emetic.

CCXCV.

CLASS V. PENTANDRIA.

This claſs conſiſts of ſuch plants as bear hermaphrodite flowers furniſhed with five ſtamina, and it is divided into ſix orders, the medical articles of each of which are:

CCXCVI.

1. Monogynia, which comprehends ſuch plants as have but one ſtile.

CCXCVII.

Flores Monopetali Inferi, Tetraſpermi, Aſperifolici.

Lithoſpermium Officinale (Officinal Cromwell).

Cor. fauce nuda infundib. Cal. 5-partitus.

This plant is inſipid and inodorous, and is even little uſed in medicine.

CCXCVIII.

Anchuſa (Alkanet).

Cor. fauce fornicat. infundib. tubo baſi priſmatico.

Anchuſa Officinalis (Officinal Bugloſs).

This plant is entirely of a mucilaginous nature.

CCXCIX.

Anchusa Tinctoria (*Dier's Bugloss*).

This plant is of a red colour, and therefore is more used as a colorant than as a medicine.

CCC.

Cynoglossum Officinale (*Officinal Hounds-tongue*).

Cor. fauce fornicata infundib. Sem. depressa lateri affixa.

This biennial plant, which grows in highways and church-yards, has a strong smell and a mucilaginous taste. In its qualities it is somewhat narcotic, and employed against vermin.

CCCI.

Pulmonaria Officinalis (*Common Lung-Wort*).

Cor. fauce nuda infundib. Cal. prismaticus.

This perennial plant, which grows in woods, has a saltish bitter mucilaginous taste, but is little used for the complaints its name describes.

CCCII.

Symphytum Officinale (*Common Comfrey*).

Cor. fauce dentata ventricosa.

This perennial plant grows in moist grounds and church-yards. The root is the part used, which abounds in a mucilaginous principle, and possesses the quality of a demulcent and emollient. It is exhibited in the form of decoction in strangury, dysentery, gravel, spitting of blood, and hematuria.

CCCIII.

Fl. Monopetali inferi Monospermi.

Plumbago Europea (European Lead-Wort).

Sem. 1. Stam. valvis inserta, cor. infundib. stigm. 5-fidum.

The root of this perennial plant, the part used, possesses an acrid burning taste. Its virtue, therefore, resides in an acrid principle. Its use is as a caustic in toothach.

CCCIV.

Flores Monopetali Inferi, Angiospermi.

Cyclamen Europeum (Common European Sow-Bread)

Caps. 1 locul. intus pulposa, cor. reflexa, stigm. acutum.

The root of this plant, when fresh, has an extremely acrid burning taste, which it loses by drying.

Its quality resides in an acrid volatile principle.

It is employed as a drastic, cathartic, emmenagogue, anthelminthic, and discutient. Externally, it is applied to schirrous and other tumors, and is likewise prepared in ointment. One dram internally is the dose.

CCCV.

Menyanthes Trifoliata (Common Marsh Trefoil).

Caps. 1 locularis, cor. villosa, stig. 2-fidum.

The leaves of this plant, which grow wild in marshy places, is the part used. It possesses an intensely bitter, and a styptic taste. Its virtue

refides in an extractive principle. It is aftringent, tonic, anthilmintic, diuritic, and deobftruent. It has been employed in dyfpepfia, chlorofis, dropfy, abdominal fullnefs, jaundice, afthma, chronic, rheumatifm, atonic gout, intermittent fevers, fcurvy, leprofy, herpes, and malignant ulcers. It is exhibited in the form of infufion or extract; in the former, 1 fcruple being allotted to 1 lb. of fluid, and 2 drams of the latter forming a dofe.

CCCVI.

Lyfimachia Numularia (*Creeping Loofe Stripe*).

Capf. 1 locularis, cor. villofa, ftigm. obtufum.

This perennial plant, which grows in fhady moift places, poffeffes a flight acidity and acrimony to the tafte. Its quality is aftringency, and it has been employed in leucorrhæa.

CCCVII.

Anagallis (*Red Pimpernell*).

Capf. 1 locularis circumfciffa, cor. rotata, ftigma capitatum.

This inodorous herb, which fhould be gathered before its flowers are unfolded, poffeffes an acrid naufeous tafte. It is employed in epilepfy, melancholy, and jaundice. It is exhibited in the form of powder in 1 dram four times a day; in extract, from 2 to 3 grs.; and in infufion, in the proportion of 2 grs. to the 1 lb. of fluid.

CCCVIII.

Spigelia (Worm-Grafs).

Capf. 2 locularis didyma, cor. infundib. ftig. 2-fidum.

Spigelia Anthelmia Annua (Annual Worm-Grafs).

This Weft India plant poffeffes a fœtid tafte, and is of a narcotic anthelminthic quality. It is exhibited againft worms.

CCCIX.

Spigelia Morilandica (Indian Pink).

This perennial American plant is more ufed than the former, and poffeffes the fame qualities. It is given in powder to the extent of 10 grs ; in infufion, in the proportion of 2 grs. to the 1 lb. of fluid ; and in decoction, in half an ounce to the 1 lb.

CCCX.

Ophiorriza Mungos (Mungos).

Capf 2 locularis, 2 partitus, cor. infundib ftig 2-fidum.

The root of this perennial plant, from the Eaft Indies, poffeffes a faline and intenfely bitter tafte. Its qualities refide in a bitter extractive principle. It is exhibited in mania and hydrophobia.

CCCXI.

Convolvulus (Bird Weed).

Capf. 2 locul., 2 fperma, cor. campanulata, ftig. 2 fidum.

Convolvulus Jalappa (Jalap).

The root of this plant, the production of New

Spain, is the part of it ufed. It has both a naufeous tafte and difagreeable fmell. Its quality refides in an acrid refinous principle. It is employed as a cathartic and anthelminthic, and is exhibited in powder from half a fcruple to to 2 grs.; refin, in a few grains.; and alfo in tincture, in a fcruple or more.

CCCXII.

Convolvulus Scammonia (Scammony).

The infpiffated juice of this perennial plant, chiefly procured by incifion of the root, is the part ufed. It is the production of Afiatic Turkey, and poffeffes an acrid bitter tafte, with a naufeous fmell. Its virtue refides in an acrid milky juice and a refinous gummy principle. It is a powerful cathartic, being of a draftic nature. It is given in dofes from 3 to 20 grs.; and it refin, mixed with liquorice powder, is termed diagridium.

CCCXIII.

Fl. Monopetali Superi.

Cinchona (Bark).

Caps. 2. locul. intus dehifcens, cor. hirfuta, ftigm. fimplex.

Cinchona Officinalis (Peruvian Bark).

The tree affording this bark is the production of Peru, and of a mountainous fituation. It poffeffes a ftrongly-bitter tafte, with an aftringency. The principle of its action refides in an aftringent refin and bitter mixed. It is a power-

ful antiseptic, tonic, astringent, and stomachic. It is used in a vast variety of morbid states, as fevers of all kinds, particularly the intermittent, putrid, &c. in weakness, in spasms, chincough, chronic diarrhæa, gangrene, phagedenic ulcers, chronic rheumatism, and other diseases. It is exhibited internally, and used also externally. Internally, it is prepared in almost every form. In powder, the dose is from 15 gr. to half a dram; in extract, from half a dram to 2 scruples; in infusion or decoction, 1 ounce of the bark is the proportion to 1 lb. of fluid.

CCCXIV.

Cinchona Caribbea (West India Bark).

This species, the product of Jamaica and St. Lucie, possesses a somewhat astringent taste, with more bitter and less aroma than the former. Its qualities are astringent, tonic, and stomachic. It is employed in the same diseases as the former.

CCCXV.

Cinchona Angustifolia.

This species is the growth of St. Domingo. Its taste is also intensely bitter, with little aroma. Its qualities are those of a tonic and stomachic. It is employed in fevers of the intermittent and remittent kind, and in typhus.

CCCXVI.

Cinchona Corymbifera.

This species much resembles the former. It

poſſeſſes a ſimilar taſte, and is employed in the ſame diſeaſes.

CCCXVII.

Cinchona Floribunda.

This ſpecies is much the ſame as the St. Lucie bark, both in taſte, qualities, and uſe.

CCCXVIII.

Cinchona Montana.

This is the product of Martinique and Guadeloupe. It is ſo intenſely bitter as to prove both emetic and cathartic.

CCCXIX.

Cinchona Tecamez.

This ſpecies poſſeſſes an aromatic bitter taſte, with an aromatic ſmell. In other reſpects it reſembles the other kinds.

CCCXX.

Coffea Arabia (Coffee).

Bacca 2. ſperm. ſem. arillata. Cor. Hippocrat. ſtigm. 2 partitum

The ſeeds or berries of this Arabian and Weſt India tree, are much employed in a torrified ſtate, and poſſeſs a fragrant aromatic ſmell.

Its qualities are thoſe of a ſtimulant, calefacient, and carminative. It is uſed, in the crude ſtate, againſt cattarrh, rheumatiſm, and amenorrhæa; but the infuſion of the torrified ſeeds is moſt in repute, being exhibited; to procure ſleep, in heartburn, headach, coſtiveneſs, and abdominal obe-

fity; and, in a very ſtrong ſtate, as 1 ounce to 3 ounces of fluid, to relieve ſpaſmodic aſthma.

CCCXXI.

Pſychotria Emetica (*Ipecacuhan*).

Bacca 2. ſperm ſem ſubcata. Cor. infundib. ſtigm emarginatum.

This perennial plant is the production of South America. The root, the part uſed, poſſeſſes a bitter ſlightly pungent taſte, with a nauſeous ſmell. Its virtue reſides in a reſinous principle, and it is chiefly employed as an emetic of mild and ſafe operation. It is exhibited in ſpaſmodic aſthma, in ſpaſms of various kinds, in the commencement of fevers to cut ſhort their progreſs, and in ſmall doſes in menorrhagia, hemoptyſis, dyſentery, diarrhæa, and chincough. The doſe, as an emetic, of the powder, is from 15 grs. to 1 ſcruple; and of the wine, from half an ounce to 1 ounce.

CCCXXII.

Lonicero (*Honeyſuckle*).

Bacc. 2 locul. ſubrotunda, cor. unæqualis. Stigm. capitatum.

Lonicero Diervilla (*Yellow-Flowered Upright Honeyſuckle*).

The roots of this ſpecies, the production of Canada, poſſeſs a nauſeous taſte and ſmell. They are uſed in Canada in ſiphylis, gonorrhæa, and dyſuria.

CCCXXIII.

Lonicero Symphorecarpus (*Shrubby St. Peter's Wart*).

The roots of this ſpecies, produced in Carolina, are ſtyptic or ſlightly aſtringent, and employed in caſes of intermittent fever.

CCCXXIV.

Fl. Inferi Angioſpermi.

Verbaſcum Thapſus (*Great Broad-Leaved Mullein*).

Caps. 2 locularis, cor rotata, ſtigm. obtus, ſtam. declinata.

This biennial plant, of which the leaves and flowers are the part uſed, poſſeſſes a ſomewhat bitteriſh taſte. It is of a mucilaginous, emollient, and demulcent nature; and employed in cough, and caſes of acrimony, and irritation, in the form of infuſion, having the proportion of 1 ounce of the plant to 1 lb. of fluid.

CCCXXV.

Datura Stramonium (*Common Thorn Apple*).

Caps. 2 locular., 4. valvis, cor infundib. cal deciduus.

This annual plant, whoſe ſeed and leaves are uſed, poſſeſſes a nauſeous bitter taſte and poiſonous ſmell.

Its qualities are thoſe of a ſtrong narcotic poiſon, which reſides in an acrid principle, and this quality it diſplays in whatever manner applied, occaſioning alienation of the mind to enſue. It has been employed in melancholy, in childbed-

madnefs, in epilepfy, in cancer, in tumors of the anus, &c. It is exhibited in the form of powder from half a gr. to 6 grs.; and alfo in the infpiffated juice.

The acetous and nitric acids are its antidotes.

CCCXXVI.

Hyofcyamus (*Henbane*).

Capf 2 locularis operculata, cor, infundib. ftigm. capitatum.

Hyofcyamus Albus (*White Henbane*).

The leaves and feeds of this poifonous plant are the parts employed, Its qualities are thofe of a narcotic poifon, and it is chiefly exhibited in the form of extract in amaurofis and cataract.

CCCXXVII.

Hyofcyamus Niger (*Black Henbane*).

This plant poffeffes a rank or poifonous fmell. Its frefh leaves are chiefly ufed. Being a ftrong narcotic poifon, it is fedative, antifpafmodic, and deobftruent. It is employed in palfy, fwellings of the anus, active hemorrhages, in convulfion, epilepfy, and madnefs; and externally, in fchirrus. It is commonly exhibited in the form of extract from half a gr. to 1 fcruple, and alfo in the oil.

CCCXXVIII.

Nicotiana Tabaccum (*Tobacco*).

Capf. 2 locularis, cor. infundib., ftigm. emarginatum.

The dried leaves are the part of this annual

plant in ufe. It poffeffes an acrid naufeous tafte, and at the fame time a fimilar naufeous fmell. Its quality refides in an acrid narcotic principle. It proves diuretic, emetic, draftically cathartic, ftimulant, errhine, vermifuge, deobftruent, fialogogue, narcotic. Internally, it is exhibited in the forms of tincture, wine, or extract, againft dropfy, fchirrus, jaundice, and catarrhal chronic affections. Externally, it is employed in the form of fmoke in hernia and coftivenefs; and in the form of lotion in the itch, ozena, and phimofis.

CCCXXIX.

Atropa (*Atropa*).

Bacca 2 locularis ftem. diftantia incurvata.

Atropa Mandragora (*Mandrake*).

The acrid root of this perennial plant is the part ufed. Its virtue refides in a narcotic principle. It is therefore fedative and antifpafmodic. Internally, it is exhibited in epilepfy; externally, it is employed in fchirrus, fcrofula, and fwelled tefticle.

CCCXXX.

Atropa Belladonna (*Deadly Nightfhade*).

The leaves and root of this perennial plant are the parts ufed. It poffeffes an acrid and flightly aftringent tafte, with a rank fmell. Its qualities are narcotic, antifpafmodic, and deobftruent. It

is employed in mania, melancholy, hydrophobia, jaundice, and dropſy. Externally, in ſchirrus, cancer, fiſtula, chronic rheumatiſm, and malignant ulcers. It is given in the form of powder or extract, beginning with a grain or leſs, and gradually increaſing the doſe till the tenſion and dryneſs of the throat or vertigo limit the quantity.

CCCXXXI.

Phyſolis Alkekengi (*Winter Cherry*).

Bacca 2 loc. calyce inflato antheræ approximatæ

The fruit and ſeeds are the parts uſed here. The fruit poſſeſſes an agreeable acidity, while the rind is intenſely bitter. Its qualities are thoſe of a diuretic and eccoprotic; and it is employed in nephritis, dyſury, and dropſy.

CCCXXXII.

Solanum (*Nightſhade*).

Bacca 2 locularis antheræ bip. foratæ.

Solanum Dulcamara (*Bitter Sweet*).

The roots are the part uſed, which poſſeſs a bitter ſweet and nauſeous taſte, with a rank fœtid ſmell. Its qualities are thoſe of a diuretic, alterative, and deobſtruent. It is uſed in decoction againſt chronic rheumatiſm, cutaneous diſeaſes, amenorrhæa, jaundice, and ſiphylis. The proportions are half an ounce to 2 ounces of the roots to 3 lb. of fluid boiled down to 2 lb. conſuming from 1 to 2 lb. a day.

CCCXXXIII.

Solanum Nigrum (*Common Nightshade*).

This annual plant possesses the same rank fœtid smell as the former. Its qualities reside in a narcotic principle, and it proves, therefore, narcotic, diuretic, and deobstruent. It is used for the same purposes as the somniferous poppy; and externally, in phlegmon, whitlow, schirrus, and ulceration. The dose of the powder is from 1 to 6 grs.

CCCXXXIV.

Capsicum (*Indian Pepper*).

Bacca, 2 locul. exsucca antheræ connivetes.

Capsicum Annuum (*Cayenne Pepper*).

The fruit of this annual plant is of an acrid burning taste, its active quality residing in a resinous principle. Its virtues are those of a stimulant, stomachic, and rubefacient. It is employed in dyspepsia, arithitic cardialgia, caryza, and in intermittent fevers.

CCCXXXV.

Capsicum Baccatum (*Bird Pepper*).

This resembles the former in its taste, qualities, and uses.

CCCXXXVI.

Strychnos.

Bacca 2 locul. corticosa, stigm. capitatum.

Strychnos Nux Vomica (*Poison Nut*).

The wood and nuts of this Oriental tree possess

an intenſely bitter taſte and rank ſmell. They are diuretic, emmenagogue, and anthelminthic. They are employed in intermittent fevers, in chronic dyſentery, cardialgia, amenorrhæa, and worms. The doſe of the powder is from 5 to 15 grs.

CCCXXXVII.

Strychnos Volubilis (*Jeſuit's Bean*).

The taſte of this nut is equally bitter as the former, and it poſſeſſes equally the qualities of a narcotic, diuretic, ſudorific, and anthelminthic. It is given in obſtinate intermittents, in amenorrhæa, in worms, in aſthma, and in chronic ſpaſm. The doſe of the powder is from 5 grs. to 1 ſcruple. The infuſion is alſo uſed in the ſame proportion. The antidote of this poiſon is the acetous acid.

CCCXXXVIII.

Cordia Myxa (*Smooth-Leaved Cordia*).

Bacc. 1 ſperm. nuc. 4 locul. ſtigm. dichotonum, calyx baccæ ticktum.

The fruit of this tree, the production of Egypt and India, is of a ſweet and mucilaginous nature. Its qualities are nutrient and lubricating. It is employed in hoarſeneſs, cough, and ſtrangury.

CCCXXXIX.

Fl. Pentopetali inferi.

Rhamnus (*Buck-Thorn*).

Bacca 3 locularis rotunda, cal. tubul. corollifer, ſquamæ oris, 5 convergentes.

Rhamnus Catharticus (*Purging Buck-Thorn*).

The inſpiſſated juice of the berries of this tree

poſſeſſes a nauſeous bitter taſte and diſagreeable ſmell. Its qualities are cathartic and diuretic. Its decoction is uſed in dropſy, in cachexia, and ſyphylis, in the proportion of 2 drams of the berries to 1 lb. of fluid. The ſyrup of the expreſſed juice is the moſt common preparation.

CCCXL.

Rhamnus Frangula (*Black Alder*).

The inner bark is the part uſed, which poſſeſſes a ſtyptic bitter taſte. It is draſtically cathartic, diuretic, and anthelminthic. It is employed in dropſy, itch, worms, and ſwellings of the anus. The doſe is from half a dram to 2 drams.

CCCXLI.

Rhamnus Ziziphus (*Shining-Leaved Rhamnus*).

The berries of this tree, the production of the Southern parts of Europe, are uſed. They poſſeſs a ſweet mucilaginous quality. They are therefore lubricant and expectorant. They are employed in cough and ſtrangury. Their preparation or form is a ſyrup.

CCCXLII.

Ceanothus Americanus (*New Jerſey Tea*).

Bacco. 3 cocca. cal. tubul. corollifer petalo *fornicata*.

The root of this ſhrub are the parts uſed. They are red, and poſſeſs an alterative virtue, being uſed externally in powder to ſiphylitic ulcers.

CCCXLIII.

Vitis (The Vine).

Bacca 5 fperma, cor. fæpe e marcido connata ftilus nullus.

Vitis Vinifera (Vine bearing Wine).

The berries and leaves are the parts ufed. The former poffefs an agreeable fweet acidulous tafte, the latter are fomewhat ftyptic. The fruit is nutrient, antifeptic, and eccoprotic, and deobftruent. The leaves are gently aftringent. This production is employed in cough, ftrangury, jaundice, abdominal obefity, and confumption. From the expreffed juice prepared by fermentation is produced wine, which varies in its particular qualities according to the nature of the fruit or grape.

CCCXLIV.

Fl. Pentopetali fuperi.

Lagœcia Cuminoides (Wild Cummin).

Sem. 2 nuda, cal. pennatu peitinat. petalo bicamia.

The feeds of this annual plant, the production of the Grecian iflands, are the part ufed. They poffefs an aromatic tafte, and are ftomachic and carminative.

CCCXLV.

Nerium Antidyfentereum (Coral-Leaved Rofebay).

Follic. 2 erecti. cor. faci coronata.

The bark is the part ufed. It poffeffes a bitter tafte, is acrid and poifonous when frefh, and has a milky juice. It is an anthelminthic, and is em-

ployed in obſtinate intermittents, in chronic dyſentery, in diarrhæa, and in toothach.

CCCXLVI.

Echites.

Follic. 2 recti, cor. infundib. fauce nuda. ſem. puppora.

This is the production of Surinam. The leaves and herb are uſed. It is employed chiefly in ſiphylis in decoction.

CCCXLVII.

Plumeria (White Plumeria).

Follic. 2 refracti, cor. infundib. ſem. alata.

This tree is the production of the Weſt Indies, and is uſed in decoction in ſiphylis.

CCCXLVIII.

Vinca Minor (Small Periwinkle).

Follic. 2 erecti, cor hypocrat. ſem. ſimplicia.

This perennial plant poſſeſſes a bitteriſh taſte. It has the peculiar effect of corrugating the ſcrotum in the form of fomentation. Its infuſion is employed in diſeaſes of the breaſt, and in cynanche in the form of gargle.

CCCXXIX.

Ribes.

Bacca polyſperma, cal. colliger ſtil. 2 fidus.

Ribes Rubrum (Red Currant).

The berry and juice, the parts uſed, poſſeſs a

taſte intenſely acid. In their qualities they are refrigerant. They are employed in fevers and ſcurvy in the form of rob and ſyrup.

CCCL.

Ribes Nigrum (*Black Currant*).

The berries and leaves are the parts uſed. The former poſſeſs an acid ſtyptic taſte. The leaves are diuretic and ſudorific. They are employed in rheumatiſm, in mucous cynanche, and in dyſentery. The root, fruit, and ſyrup, are all uſed.

CCCLI.

Hedera Helix (*Common Ivy*).

Bacca 5 ſperma cal. ungens fructum ſtigma ſimplex.

The parts uſed are the leaves, fruit, and gum reſin. The leaves have a bitter ſtyptic nauſeous taſte. The fruit is bitter and acid, and the gum has a ſlight aromatic ſmell. The infuſion of the leaves is employed in infantile atrophy, rickets, œzena, and ulcers.

CCCLII.

2. Digynia, or ſuch plants as have two ſtiles, the medical articles of which are:

CCCLIII.

Flor. Monopetali inferi.

Aſclepias Vincetoxicum (*White and Yellow Swallow-wort*).

Follicul. 2 cor. reflexa nectariis 5 uniformibus unguiculatis.

This perennial plant poſſeſſes a bitter acrid

aromatic taſte, with a penetrating ſmell. Its qualities are thoſe of a ſtimulant, diuretic, and emmenagogue. It is employed in dropſy, and reſembles valerian.

CCCLIV.

Gentiana (Gentian).

Caps. 1 loc. 2 valris cor. tubuloſa indeterminata.

Gentiana Lutea (Yellow Gentian).

The root is the part uſed, which poſſeſſes an intenſe and pure bitter taſte. Its qualities are ſtomachic, antiſeptic, and anthelminthic. It is employed in dyſpepſia, jaundice, intermittent fevers, dropſy, chloroſis, gout, end worms. It is exhibited in extract and infuſion, watery or vinous. The doſe is from a ſcruple to a dram.

CCCLV.

Gentiana Purpurea (Purple Gentian).

This ſpecies is the ſame as the former in its general qualities.

CCCLVI.

Gentiana Centaureum (Leſſer Centaury).

This ſpecies is alſo little different from the two former.

CCCLVII.

Fl. Incompleti.

Chenopodium (Gooſe-Foot).

Sem. 1 orbiculare, cal. 5-phyllus foliolis concavis.

Chenopodium Ambroſoid (Mexican Gooſe-Foot).

The plants and ſeeds are the parts uſed. It

has an acrid aromatic taſte, with a fragrant ſmell. Its qualities are nervine and ſtimulant; thoſe of the ſeeds, anthelmintic and carminative. They are employed in palſy, nervous weakneſs, dyſpepſia, flatulence, and worms. The form is either in infuſion or tincture.

CCCLVIII.

Chenopodium Anthelminthicum (*Shrubby Gooſe-Foot*).

This ſpecies poſſeſſes an aromatic and ſtrong fragrant ſmell. Its qualities are anthelminthic, and it is employed againſt the lumbrici.

CCCLIX.

Chenopodium Vulvaria (*Stinking Gooſe-Foot*).

This ſpecies has a fœtid goatiſh ſmell, is conſidered as an antiſpaſmodic, and uſed in hyſteria.

CCCLX.

Salſola.

Sem. 1 cochleatum tectum, cal. 5-phyllus.

It is from this plant the ſoda is produced. It is divided into three ſpecies, *Salſola Kali*, *Salſola Sativa*, and *Salſola Soda.*

CCCLXI.

Ulmus Campeſtris (*Elm-Tree*).

Bacca exſucca compreſſa, cal. 1-phyllus emareſcens

The inner bark, the part uſed, poſſeſſes a bitteriſh ſtyptic taſte. Its virtues are thoſe of a tonic, aſtringent, diuretic, and alterative. The decoction

is employed in leproſy and other cutaneous diſeaſes, in phagedenic ulcers, gout and dropſy. The proportions are 1 or 2 ounces of the bark to 2 pounds of water boiled to one.

CCCLXII.

Fl. Pentapetali ſuperi diſpermi Umbellatæ.

A. *Involucro univerſali partialique.*

Eryngium (*Eryngo*).

Fl. capitati recept. paleaceum.

The root of this perennial plant poſſeſſes a ſweetiſh and ſlightly aromatic taſte. Its virtues are diuretic and aphrodiſiac. It is employed in pulmonary conſumption in infuſion in the proportion of half an ounce to a pound of fluid, which is exhibited daily.

CCCLXIII.

Sanicula Europæa (*Common Sanicle*).

Fl. ſubumbellata abortivi, ſem. muricata.

This perennial plant is inſipid and inodorous, but is ſaid to poſſeſs deobſtruent virtues.

CCCLXIV.

Daucus Carota (*Wild Carrot*).

Fl. radiati abortivi invol. pennatum. ſem. hiſpida.

The root, leaves, and ſeed, are all uſed. The root poſſeſſes a ſweet mucilaginous taſte, depending on a ſaccharine mucilaginous principle. The ſeeds have an aromatic bitteriſh taſte and fragrant ſmell. The virtues of the root are demulcent and

antiſeptic; thoſe of the ſeeds, ſtimulant and anthelminthic. Externally, the root is uſed in the form of cataplaſm to phagedenic, putrid, and herpetic ulcers, and to cancer. Its decoction is alſo applied in ſtrangury.

CCCLXV.

Conium (*Hemlock*).

Fl. floſc. fertil. pet. cordata. involuc. dimidiata, ſem. gibba coſtato ſulcata.

Conium Maculatum (*Common Hemlock*).

This biennial plant poſſeſſes an acrid nauſeous taſte and rank ſmell. Its virtue reſides in a narcotic acrid principle, and it proves therefore narcotic and diuretic. It is uſed externally in the form of powder and cataplaſm in ſchirrus, phagedenic ulceration, ſcrofula, and caries; and internally, in the ſame diſeaſes, and alſo in chincough, tenia, ſwelled teſticle, proſtate, &c. Its forms are the powder and extract, beginning with one grain, and gradually aſcending to a conſiderable quantity.

CCCLXVI.

Ferula.

Fl. floſc. fert. pet. cordata, ſem. plana.

Ferula Aſa Fœtida (*Aſa Fœtida*).

The gummy reſinous juice is the part uſed. It poſſeſſes an acrid aromatic nauſeous taſte, with a garlic or alleaceous ſmell. Its quality depends on a volatile oil and reſinous principle. It is ſti-

mulant, antiſpaſmodic, anthelmintic, carminative, emmenagogue, deobſtruent, and reſolvent. Hence it is employed both externally and internally in the form of pills, tincture, gliſter, and plaiſter againſt various diſeaſes, as hyſteria, convulſion, ſpaſmodic cardialgia, flatulent cholic, tympany, ſpaſmodic aſthma, chincough, worms, paronychia, bubo, and caries.

CCCLXVII.

Laſerpitium Siler (*Mountain Leſſer-wort*).

Flor. floſculoſi abortivi, pet. cordata, ſem. plana.

The ſeeds, the part uſed, poſſeſs an acrid aromatic taſte and fragrant ſmell. They are carminative and ſtomachic, and uſed in painful lochia.

CCCLXVIII.

Angelica.

Fl floſc. fert pet. planiuſc. umbellulæ globoſæ

Angelica Archangelica (*Garden Angelica*).

The root, leaves, and ſeed, are the parts uſed. The poſſeſs an acrid aromatic and warm taſte, with a fragrant ſmell. Their principle depends on a volatile oil. They are ſtimulant, ſialogue, carminative, and ſudorific.* They are employed in dyſpepſia and flatulence.

CCCLXIX.

Angelica Sylveſtris (*Wild Angelica*).

The root poſſeſſes the ſame virtues as the former ſpecies, but its powers are weaker.

CCCLXX.

Sium.

Fl. flosc. fert. pet. cordata sem. suborat. striata.

Sium Ninsi.

The root of this perennial plant, the production of Japan, possesses a sweetish bitter somewhat aromatic taste. Its qualities are cordial and fattening. It is employed in anaphrodisia, asththemia, and marasmus.

CCCLXXI.

Sium Nodiflorum (Creeping Water Parsnip).

The expressed juice is employed in diseases of the skin, in the proportion of from 1 to 4 ounces every morning.

CCCLXXII.

Sison Amomum (Field Honey-wort).

Fl. flosc. fert pet. planiusc. umbella depauperata.

The seeds of this plant, the part used, possess an agreeable aromatic bitter taste. They are stimulant and carminative, and prove useful in flatulence and sterility.

CCCLXXIII.

Bubon (Parsley).

Fl. flosc. fert. pet. pleniusc. inv. 5-phyllum.

Bubon Macedonicum (Macedonian Parsley).

The seeds are the part used. They possess an aromatic sweetish taste. They prove carminative,

diuretic, and emmenagogue. They are employed in ſiphylis.

CCCLXXIV.

Bubon Galbanum (*Galbanum, or long-leaved Bubon*).

The inſpiſſated juice of this perennial African production is the part uſed. It poſſeſſes a bitter acrid taſte, with an alleaceous penetrating ſmell. Its virtues are ſtimulant, antiſpaſmodic, emmenagogue, expectorant, and reſolvent. It is employed in hyſteria, aſthma, amenorrhea, and athenia. Externally, for the purpoſe of reſolving and maturating tumors. It is exhibited in the form of pills or emulſion from a ſcruple to a dram.

CCCLXXV.

Cuminum (*Cumine*).

Fl. floſc. fert. pet. cordata umb. 4-fida invol ſetaceis longiſſimus.

The ſeeds of this plant, the production of Egypt and the South of Europe, have an acrid aromatic taſte, and fragrant odor. They are ſtimulant and carminative, and are employed in flatulent cholic, tympany, and ſwellings of a cold nature.

CCCLXXVI.

B. *Involucris partialibus univerſali nullo.*

Philandrium.

Fl floſc fertiles fr. coronati.

Phillandrium Aquaticum (*Water Phillandrium*).

The ſeeds of this biennial plant poſſeſs an acrid aromatic taſte and ſmell. They are flatulent and

narcotic, and employed in dyſpepſia, in intermittents and hypochondriaſis, in ſcrofulous and atonic ulcers, and in pulmonary conſumption.

CCCLXXVII.

Cicuta.

Fl. floſc. fertibus pet paniuſcula.

Cicuta Viroſa (Water Hemlock).

This poiſonous plant poſſeſſes an acrid taſte and rank ſmell. It is a narcotic and reſolvent.

CCCLXXVIII.

Æthuſa (Spignel).

Fl. ſubradiat. fert. involucella demidiata.

Æthuſa Meum (Common Spignel).

The root of this perennial plant poſſeſſes an acrid aromatic warm taſte. It is ſtimulant and carminitive, and employed in the tertian intermittent, aſthma, and leucorrhœa.

CCCLXXIX.

Coriandrum (Coriander).

Fl radiat. abortivi fr. ſubgloboſi.

Coriandrum Sativum (Common Coriander).

The ſeeds of this annual plant poſſeſs an aromatic taſte, but rather offenſive ſmell. They remarkably leſſen the diſagreeable taſte and ſmell of ſenna. They are hipnotic and carminative, and chiefly employed in infuſion with ſenna.

CCCLXXX.

Imperatoria (Master-wort).

Fl. flosc. fertiles, umb. expanso plana.

Imperatoria Ostruthium (Common Master-wort).

The root of this perennial plant possesses a bitter acrid aromatic warm taste, with a fragrant smell. Its quality resides in a volatile oil and resinous principle. It is stimulant, carminative, emmenagogue, and sialogogue. It is given in atonic amenorrhæa, in dyspepsia, flatulent cholic, palsy, intermittents, ring-worm, and in sterility. Its dose is from 10 to 30 grains.

CCCLXXXI.

C. *Involucro nullo, nec universali, nec partialibus.*

Pastinaca.

Fl. flosc. fertiles, sem. depresso-plana.

Pastinaca Opopanax (Rough Parsnip).

This concrete nauseous gum has an acrid bitterish taste, with a rank strong smell. Its virtue resides in a volatile oil and resinous principle. It is nervine, eccoprotic, carminative, and emmenagogue. It is used in cough and asthma.

CCCLXXXII.

Anethum (Dill).

Fl. flosc. fertiles, sem marginat. striata.

Anethum Graveolus (Garden Dill).

This annual plant and its seeds are used. In

possesses a somewhat aromatic taste and disagreeable smell. It is hipnotic, carminative, and lactiferous. It is exhibited in three forms, of a volatile oil from the seeds, a water, and spirit. The dose of the oil is from 5 to 10 drops.

CCCLXXXIII.

Anethum Fœniculum (*Sweet Fennel*).

The seeds of this perennial plant are chiefly used. They have a sweetish aromatic taste, and disagreeable smell. Their principle resides in a volatile oil. They are carminative, lactiferous, and resolvent. They are employed in dyspepsia, flatulent cholic in infancy, want of milk, and in ophthalmy. The dose of the powder is a scruple, and the proportion in the infusion is two or three drams to 1 lb. of fluid.

CCCLXXXIV.

Carum (*Caraway*).

Fl. flosc. abortivi, sem. gibba striata.

Carum Carvi (*Common Caraway*).

The seeds of this perennial plant have an aromatic acrid warm taste. Their virtue resides in a volatile oil. They are stimulant, lactiferous, and resolvent. The dose of the powder is from a scruple to a dram, and the proportion of the decoction is 1 ounce to 1 lb. of water.

CCCLXXXV.

Pimpinella (Saxifrage).

Fl. flosc. fertiles, (umbellæ ante florescentiam nutantes,) pet. cordata.

Pimpinella Saxifraga (Small Burnet Saxifrage.)

The root of this perennial plant possesses an acrid warm taste, with a goatish smell. Its virtue resides in an acrid resinous principle. It is stimulant, diuretic, emmenagogue, and resolvent. It is employed in angina and hysteria. Its forms are the powder and tincture.

CCCLXXXVI.

Pimpinella Anisum (Anise).

The seeds of this annual Egyptian plant possess a sweetish aromatic taste, with a sickly fragrant smell. Their virtue resides in a mild volatile oil. They are stimulant, carminative, lactiferous, and resolvent. They are employed in flatulence and rheumatism; in the form of powder, from a scruple to half a dram; in infusion, from an ounce to a pound of fluid; and in oil, from ten drops to two drams.

CCCLXXXVII.

Apium.

Fl. flosc fertiles, fem. minuta striata, pet. inflexa.

Apium Petroselinum (Parsley).

The root, seeds, and plant, are all used. The former is diuretic and resolvent, and employed to

dispel the milk, and root out vermin. It is used in jaundice, in dysuria, in weaning, &c.

CCCLXXXVIII.

Apium Graveolens (*Sellery*).

The same parts are used here as in the former. They possess a sweetish taste, with a strong or rank smell. Their virtue resides probably in a volatile oil. They possess the same qualities as the former species.

CCCLXXXIX.

3. Trigynia, or such plants of this class as have three styles, the medical articles of which are:

CCCXC.

Fl. Superi.

Rhus.

Cor. 5-petala, bacca 1-sperma.

Rhus Corinaria (*Elm-Leaved Sumach*).

The berry and seeds of this tree are used. Their virtue resides in a most astringent acid principle. Their qualities are therefore of a styptic nature, and they are employed in hæmorrhages and gonorrhæa.

CCCXCI.

Cassine.

Cor. 5-petala, bacca 3-sperma.

Cassine Peragua (*Peraguay Tea*).

The leaves of this tree, the part used, have an intensely bitter taste. Hence they prove emetic, cathartic, diaphoretic, and expectorant. They are

employed in diabetes, nephritic colic, and in chronic catarrhal affections of the lungs.

CCCXCII.

Sambucus.

Cor 5-fida, bacca 3-sperma.

Sambucus Ebulus (*Dwarf Elder*).

Every part of this shrub is used. It possesses an acrid nauseous bitter taste, with a rank fœtid smell. It is drastically cathartic, diuretic, emetic, and narcotic. The decoction of the bark and leaves is used in dropsy, itch, and leucorrhæa. Its dose is two drams, and the juice of the berries an ounce.

CCCXCIII.

Sambucus Nigra (*Black Berried Elder*).

The fruit of this species is gratefully acid. The other parts resemble the former species. The infusion of the bark and tops is employed in dropsy and erisipelas, the proportion being two drams, or half an ounce, to one pound of fluid.

CCCXCIV.

Tamarix (*Tamarisk*).

Cor. 5-petala, caps. 1-locularis, sem. papposa.

Tamarix Gallica (*French Tamarisk*).

The root, bark, and leaves, are all used. They possess a bitter styptic taste, and are astringent in their quality.

CCCXCV.

4. Tetragynia, or ſuch plants of this claſs as have four ſtiles, but of theſe there are none in medicine of importance.

CCCXCVI.

5. Pentagynia, or thoſe that have five ſtiles, the medical articles of which are:

CCCXCVII.

Linum (*Flax*).

Cor. 5-petala, capſ. 10-locularis, 2-ſpermæ.

Linum Uſitatiſſimum (*Common Flax*).

The ſeeds of this annual plant are the parts uſed. Its qualities are mucilaginous and oily. It is lubricating and emollient. It is employed in decoction or infuſion, in dyſury, nephritis, gonorrhæa, in the form of glyſter, in teneſmus, in cataplaſm, in cynanche, and in phlegmon. The proportion of the ſeeds in the decoction are an ounce to one pound of water. The expreſſed, or fixed oil, ſhould be prepared cold.

CCCXCVIII.

Linum Catharticum (*Purging Flax*).

This annual plant has a ſaltiſh bitter nauſeous taſte. Its virtue is cathartic, and it is employed in dropſy and nephritis. The proportion in infuſion is two drams to one pound of fluid.

CCCXCIX.

CLASS VI. HEXANDRIA.

This clafs is compofed of fuch plants as bear hermaphrodite flowers with fix ftamina. The flowers of this clafs may be known from thofe of the 15*th* by this diftinction, that the ftamina are of equal length. The orders of this clafs are five.

CCCC.

1. The firft, or monogynia, comprehends fuch plants as have but one ftile, and the medical articles of this order are:

CCCCI.

Bromelia.

Cor. 3-partita, cal. 3-partitus, bacca fuperus.

Bromelia Ananas (*Queen Pipe Apple*).

The fruit and outer rind are ufed. It poffeffes a moft agreeable fweet acid tafte, with a little acrimony. It is highly cordial, and the rind is emmenagogue.

CCCCII.

Allium (*Garlic*).

Cor. infera, 6-petala, pet. ovata feffilia.

The root and its juice are the parts ufed. They poffefs an acrid tafte, and a peculiar volatile fmell, called alliaceous. Their qualities are diaphoretic, anthelminthic, aphrodifiac, diuretic, and rubefacient. When boiled, they are emollient and maturating. Externally, the juice is ufed in toothach and rheu-

matic dropſy. In the form of cataplaſm, they are applied to phlegmon, bubo, and ſwellings of the anus.

CCCCIII.

Allium Sativum (*Cultivated Leek*).

The recent root and juice are here uſed as in the former. They poſſeſs an acrid ſubcauſtic taſte, with an alliaceous volatile ſmell. Their virtue reſides in an acrid principle, and a ſmall proportion of volatile oil. They are diuretic, diaphoretic, anthelminthic, rubefacient, and maturating. The juice is uſed externally in deafneſs, herpes, and corns; and the recent root and juice is internally exhibited in quartan, in dyſpepſia, dropſy, aſthma, and ſcurvy.

CCCCIV.

Lilium (*Lily*).

Cor. infera, 6 petala, petalis baſi canaliculato-tubularis.

Lilium Candidum (*White Lily*).

The white petals poſſeſs a fragrant odor, and the root a mucilaginous quality.

CCCCIV.

Scilla (*Squill*).

Cor. infera, 6-petala decidua, filam. filiformia.

Scilla Maritima (*Sea Onion*).

The root of this perennial plant, growing on the ſandy ſhores on the ſouth of Europe, poſſeſſes a taſte intenſely bitter, nauſeous, and acrid. Its

quality refides in an acrid volatile principle. Its virtues are diuretic, expectorant, emetic, and cathartic. It is employed in dropfy, jaundice, baftard peripneumony, catarrahal afthma, and in thefe feveral cafes it is joined with opium, aromatics, or mercury. Externally, it is ufed in friction to the belly in dropfy. The dofe of the recent root is from 5 grains to 20; of the dried, from 1 grain to 6. Its various forms are wine, vinegar, and oxymel.

CCCCV.

Afparagus (*Afparagus*).

Cor. infera, 6-petala, bacca 6-fperma.

Afparagus Officinalis (*Garden Afparagus*).

The root of this perennial plant is the part ufed. It is fweetifh and inodorous, giving the urine a fœtid fmell, which is corrected by the addition of an acid. Its qualities are diuretic.

CCCCVI.

Dracena (*Dragon Tree*).

Cor. infera, 6-petala, bacca 3-fperma;

Dracena Draco (*Dragon's Blood*).

The refin, or concrete juice of this Oriental fhrub is the part ufed. It poffeffes a ftyptic quality, and is therefore ufed in hemorrhages, leucorrhæa, and all morbid difcharges of a paffive nature.

CCCCVII.

Alöe (Aloes.)

Cor. infera, 6-fida, filam. receptaculo inſerta.

The inſpiſſated juice of this perennial plant is the part uſed. Its taſte is intenſely bitter and nauſeous. Its ſmell is moſtly reſinous. Its virtue reſides in an extractive reſinous principle. It is cathartic, particularly by its action affecting the rectum; ſtomachic, emmenagogue, and anthelminthic. It is given internally in coſtiveneſs, pyroſis, dyſpepſia, and ſuppreſſed hemorrhoids; externally, in putrid ulcers, and in caries, &c. Its forms are an extract, tincture, and wine. The doſe of the extract, 2 grains, or more; of the tincture, from half an ounce to 2 ounces; and of the wine, from a dram to half an ounce.

CCCCVIII.

Acorus (Sweet Flag).

Spadix multiflorus, capſ. 3-locularis.

This perennial plant is the production of moiſt marſh grounds. The root is the part uſed, which has an aromatic bitter taſte, with a fragrant ſmell. Its virtues are ſtimulant and ſtomachic. It is employed in dyſpepſia, in doſes of half a dram. Its preparations are an extract and candy.

CCCCIX.

2. Digynia comprehends the plants of this claſs, which have two ſtiles; the only medical article of which is the

CCCCX.

Oriza (Rice).

Glum 1-flora, cor. 2-glumis, sem. oblongum.

This annual plant is mucilaginous and sweet, and farinaceous. Its virtues are nutrient and lubricating. It is employed as a medicine in diarrhœa and dysentery.

CCCCXI.

3. The individuals of the order of trigynia, or those which have three stiles, are:

CCCCXII.

Rumex (Dock).

Cal. 3-phyllus, cor. 3-petala, sem. triquetrum.

Rumex Acetosa (Sorrel).

The herb, seed, and root, are all used. The first has an acid taste, the root and seeds are austere and bitter. Its virtues are those of an antiseptic. It is employed, in the herb and juice, in scurvy and cutaneous diseases; and externally in the form of cataplasm to scrofulous ulcers.

CCCCXIII.

Rumex Acutus (Sharp-pointed Dock).

It possesses a bitterish and acidulous taste. Its virtues are as a styptic, being used in decoction in itch and cutaneous diseases; and externally, in atonic ulcers.

CCCCXIV.

Rumex Alpinus (*Alpine Dock*).

This ſpecies has a bitter cauſtic taſte; and, being aſtringent, is applied to atonic ulcers.

CCCCXV.

Rumex Hydrolapathus (*Water Dock*).

This ſpecies has alſo a bitter acrid ſtyptic taſte. Its virtues are aſtringent and reſolvent. It is employed in decoction in diſeaſes of the ſkin, and ſcurvy; externally, in the form of lotion to ulcers, from 2 drams to half an ounce, in the proportion to 1 lb. of fluid in decoction.

CCCCXVI.

Rumex Sanguineus (*Bloody Dock*).

This ſpecies poſſeſſes the ſame auſtere taſte, is aſtringent, and employed in dyſentery and ulcers.

CCCCXVII.

Rumex Scutatus.

The taſte of this ſpecies is gratefully acid and refrigerant.

CCCCXVIII.

Colchium (*Meadow Saffron*).

Cal. ſpatha, cor. 6 petaloidea.

Colchium Autumnale (*Autumnal Meadow Saffron*).

The root of this perennial plant, the part uſed, has a taſte intenſely acrid and nauſeous, with a rank ſmell. Its virtues are narcotic, draſtically cathartic, and diuretic. It is employed in dropſy; and its preparations are a vinegar and oxymel.

CCCCXIX.

4. Of the orders of tetragynia and polygynia, there are no medical articles.

CCCCXX.

CLASS VII. HEPTANDRIA.

This clafs confifts of fuch plants as bear hermaphrodite flowers, furnifhed with feven ftamina. The orders of this clafs are four.

CCCCXXI.

1. Monogynia, the firft order, comprehends fuch plants as have but one ftile; and of this order only one medical article occurs.

CCCCXXII.

Æfculus (*Chefnut*).

Cor. rotata, fub-feptem-partita, Cal. 5-dentatus, capf. 3 locularis, 2 fperma.

Æfculus Hypocaftanum (*Common Horfe-Chefnut*).

The bark of this tree, the part ufed, is aftringent; and is ufed in the form of powder, or extract, in intermittents.

CCCCXXIV.

CLASS. VIII. OCTANDRIA.

This clafs is compofed of fuch plants as bear hermaphrodite flowers furnifhed with 8 ftamina. The orders of it are four.

CCCCXXV.

1. The firft, or monogynia, comprehends fuch plants as have but one ftile, the medical articles of which are:

CCCCXXVI.

Fl. Completi.

Trapæolum (Cress).

Cor. 5 petala, cal. 5-fidus infer. calcarat. Bacca [illegible]sperm.

Trapæolum Majus (Indian Cress).

This annual plant is acrid to the taste, is diuretic in quality, and used in scurvy.

CCCCXXVII.

Amyris.

Cor. 4 petala, cal. 4-dentatus infer. Bacca 1 sperma.

Amyris Elemifera (Gum-Elemi).

The resin of this American tree is of a pellucid yellow colour. Its virtues are resolvent and stimulant. It is externally used in plasters and ointments.

CCCCXXVIII.

Amyris Gileadensis (Balm of Gilead).

This production is from the same tree, as well as the

CCCCXXIX.

Amyris Zeylandia.

This species, from Ceylon, agrees in qualities with the former.

CCCCXXX.

Vaccinium.

Cor. 1 petala, cal. 4-dentatus super. bacca filam. receptaculi.

Vaccinium Myrtillus (Bill-Berry).

The recent fruit of this shrub possesses an acid

ſtyptic taſte. Its virtues are ſomewhat aſtringent and antiſeptic. It is employed in bilious and putrid fevers, in diarrhæa and ſcurvy. Its forms are a ſyrup and rob.

CCCCXXXI.

Vaccinium Vitis Idæa (*Red Bill-Berry*).

The fruit is acid and refrigerant, and employed in acute fevers in the form of rob.

CCCCXXXII.

Vaccinium Oxycoccos (*Cranberry*).

This ſpecies agrees in qualities with the former.

CCCCXXXIII.

Daphne.

Cal. 4 fidus, corollinus æqualis, ſtam. incluſa, bacca pulpoſa.

Daphne Mezereum (*Mizerium*).

The bark of the root is the part uſed, which has an acid burning taſte. Its virtue reſides in an acrid principle. It is draſtically cathartic, emetic, diuretic, and externally corroſive and veſicant.

In the form of decoction it is employed againſt diſeaſes of the ſkin, and venereal affections of the bones; and externally, in the form of cataplaſm to ſchirrus and leproſy. Two drams of the bark is the proportion to 2 lbs. of water. The antidote is camphor.

CCCCXXXIV.

Daphne Laureola (*Spurge Laurel*).

This ſpecies reſembles the former, and the bark

moiſtened with vinegar is often applied in place of a bliſter. Its only preparation is an ointment for iſſues.

CCCCXXXV.

2. In the order of digynia, no medical articles occur.

CCCCXXXVI.

3. In the order of trigynia, or plants having three ſtiles, the number is ſmall.

CCCCXXXVII.

Polygonum.

Cor. o. cal. 5 partitus, ſem. 1. nudum.

Polygonum Biſtorta (*Great Biſtort*).

The root, the part uſed, has a ſtyptic taſte, and its virtue reſides in an aſtringent principle. It is tonic and aſtringent, and employed with gentian, in the form of powder, decoction, and infuſion, in intermittents, propheria, or paſſive diſcharges, and in leucorrhæa. The doſe is 3 drams a day.

CCCCXXXVIII.

4. In the order of tetragynia, or plants having four ſtiles, there is only

CCCCXXXIX.

Paris.

Cor 4 petala ſubulata, cal. 4 phyllus, bacca 4 locularis.

Paris Quadrifolia (*True-Love*).

The fruit and plant are the parts uſed. It poſſeſſes a ſweetiſh taſte, with a rank ſmell. It is

employed in convulſions, madneſs, bubo, and ophthalmia.

CCCCXL.

CLASS IX. ENNEANDRIA.

This claſs is compoſed of ſuch plants as bear hermaphrodite flowers, furniſhed with nine ſtamina. It conſiſts of three orders.

CCCCXLI.

1. The firſt order, monogynia, comprehends ſuch as have but one ſtile.

CCCCXLII.

Laurus.

Cal. o. cor. 6 petala calycin, bacca 1 ſperma.

Laurus Cinnamomum (*Cinnamon*).

The bark of this tree, the production of Ceylon, is the part uſed. It poſſeſſes firſt a ſweet, then an acrid aromatic agreeable taſte, with a highly fragrant ſmell. Its virtue reſides in a volatile oil. It is cordial, ſtimulant, calefacient, tonic, antiſpaſmodic, ſtomachic, carminative, and aphrodiſiac. It is employed in dyſpepſia, anaphrodiſis, and alenic diſeaſes. The doſe of the powder is from 10 to 30 grains. Its various preparations are in watery and vinous infuſion, in ſpirit, tincture, and volatile oil.

CCCCXLIII.

Laurus Caſſia (*Caſſia*).

The herb and flowers of this ſpecies are the

parts ufed. It poffeffes an acrid aromatic tafte, with a fragrant fmell, but both weaker than the former. Its principle refides alfo in a volatile oil. It is ftimulant and calefacient, and employed in palfy of the tongue. The flowers fupply the place of the cinnamon bark. Its preparation is its volatile oil.

CCCCXLIV.

Laurus Cutilanus (*Clove-tree*).

This fpecies is the production of Amboyna and the Molucca Iflands. The bark is the part ufed. It poffeffes an aromatic tafte, refembling that of caffia, at the fame time mucilaginous and fomewhat aftringent. It is calefacient, tonic, carminative, and ftomachic. It is employed in palfy, flatulent cholic, and dyfpepfia.

CCCCXLV.

Laurus Myrrha (*Myrrh-tree*).

This fpecies is the production of China, and from it probably the refinous gum is extracted.

CCCCXLVI.

Laurus Nobilis (*Common Sweet Bay*).

The leaves and berries are the parts ufed. It poffeffes an acrid aromatic bitterifh tafte. Its virtue refides in a volatile, mixed with a fixed oil. It is calefacient, ftomachic, carminative, and refolvent. It is employed internally in amenorrhœa, dyfpepfia, chlorofis, hyfteria, and lochial pains, externally, in the form of oil, in cold tumors,

itch, and vermin. The only preparation is the oil.

CCCCXLVII.

Laurus Pecunia.

The fruit of this tree, the production of Brazil, is the part used. It possesses an agreeable bitterish aromatic, and somewhat styptic taste, with a fragrant smell. Its virtue resides in a volatile, mixed with a fixed oil. It is stimulant, stomachic, and somewhat astringent. It is employed in chronic dysentery, diarrhœa, and pains of the belly. The dose is 10 grains of the powder in sugar.

CCCCXLVIII.

Laurus Sassafras (Sassafras-tree).

The root and bark are the parts of this Virginian tree used. It possesses an aromatic, somewhat sweetish, taste, with a fragrant smell. Its principle resides in a copious volatile oil. It is stimulant, diuretic, and sudorific. It is used in the form of decoction and infusion in cachexy, lues, and chronic rheumatism, and gout; also in cutaneous diseases. Its preparation is the volatile oil.

CCCCXLIX.

Anacardium.

Cal. 5 partitus, cor. 5 petala, nux receptaculo carnoso. stam decimo-castrato.

Anacardium Occidentale (Cashew Nut).

The nut of this tree, the production of the

Brazils and the Weſt Indies, is of a black cauſtic oily nature. It excoriates, and gives a black tinge. It is employed in maculæ, impetigo, and herpes.

CCCCL.

2. The next order of this claſs is trigynia, or plants having four ſtiles, the only ones of which are:

CCCCLI.

Rheum (*Rhubarb*).

Cal. o. car. fida ſem. 1. triquetrum.

Rheum Palmatum (*Officinal Rhubarb*).

The root, the part uſed, poſſeſſes an acrid bitter, ſomewhat ſtyptic and nauſeous, taſte, with a nauſeous ſmell when preſſed. Its virtue reſides in a mucilaginous reſinous principle, with a peculiar ſalt, ſtated the oxolate of lime. It is cathartic, tonic, antiacid, ſtomachic, and anthelmintic. It is employed in diarrhæa, colic, dyſentery towards the termination, in rickets, and abdominal obſtructions. Its forms are the powder in doſes from 10 grains to 1 dram; the infuſion, in the proportion of a dram to 6 or 8 ounces of water. Its other preparations are a tincture, ſyrup, and watery alkaline infuſion.

CCCCLII.

Rheum Rhaponticum (*Rhapontic Rhubarb*).

This ſpecies is more ſtyptic and leſs nauſeous than the former. It is employed in diarrhæa and leucorrhæa.

CCCCLIII.

Rheum Undulatum (Chinese Rhubarb).

This species is more cathartic than the first.

CCCCLIV.

CLASS X. DECANDRIA.

This class consists of such plants as bear hermaphrodite flowers furnished with ten stamina. The orders are five.

CCCCLV.

1. Th. first, or monogynia, comprehends such as have one stile, the medical articles of which are:

CCCCLVI.

Hymenæa.

Cor. sub inæqualis legum. lignosum pulpa farinosa

Hymenæa Camboril (Locust Tree).

A resin from the bark and root is the part used. It is yellow and pellucid, with a resinous taste and fragrant smell. Its virtues are nervine, and it is employed in muscular contraction and paralysis.

CCCCLVII.

Cassia.

Cor. inæqualis anther. retortæ legum. isthmis interceptum.

Cassia Fistula (Purging Cassia).

The fruit and pulp are the parts used of this Oriental tree. It possesses a sweetish acid taste, mucilaginous, and somewhat nauseous. It is

cathartic, and employed in coſtiveneſs, from half an ounce to two ounces for a doſe.

CCCCLVIII.

Caſſia Senna (*Senna*).

The leaves of this African ſhrub are the parts uſed. They have ſome ſlight acrimony and bitterneſs of taſte, with a nauſeous ſmell. Their virtue is cathartic. They are employed in coſtiveneſs in the form of tincture or infuſion, and externally againſt herpes.

CCCCLIX.

Myroxylon Peruiferum (*Balſam of Peru*).

This tree, the growth of South America, produces this balſam, which has an acid taſte and ſweet-ſmelling odor. It is employed in dyſpepſia, ſpaſm, amenorrhæa, gonorrhæa, cold affections of the bowels, conſumption, and ulcers. Externally, it is applied to rheumatic fever. The doſe is 6 to 30 grains often in the day, beat up with the yolk of an egg or ſugar.

CCCCLX.

Flores Polypetali Æqualis.

Guiacum (*Guiac*).

Cal. lacin. 2 exteriores minores, capſ. carnoſa, 3. ſperm. 4-locularis anguſtatis

Guiacum Officinale.

The wood, bark, and concrete gum of this Weſt Indian tree are all uſed. The bark and wood have

a bitteriſh and ſomewhat acrid taſte, while the gum is highly acrid and pungent. Its virtues are thoſe of a ſtimulant, ſudorific, and attractive. It is given in ſiphylis, wandering gout, rheumatiſm, atonic diſeaſes of the lungs, leucorrhæa, and cutaneous affections. The bark and wood are exhibited in decoction in the proportion of 1 ounce of them to 2 lbs. of water; while the gum is given from two and twenty grains to a dram, in the form of powder or tincture.

CCCCLXI.

Dictamnus (Dittany).

Cor. patula, filam. pulveracea capſ. 5 convexæ, ſem arillata.

Dictamnus Albus (White Dittany).

The root of this perennial plant is the part uſed. It poſſeſſes a bitteriſh and ſlight aromatic taſte, with an ambroſial ſmell in its recent ſtate. Its qualities are nervine, anthelminthic, and emmenagogue. It is uſed in epilepſy, leucorrhæa, and worms. It is given in tincture, from 20 drops to a dram a day.

CCCCLXII.

Ruta (Rue).

Germen genitis 10 melliferis, capſ. 5-fida, 5 locularis, polyſpermæ.

Ruta Graveolens (Common Rue).

The ſeeds and plant are both uſed. They poſſeſs a nauſeous acrid bitter taſte, with a fœtid

ſmell. Their principle reſides in a volatile oil. Their qualities are ſudorific, carminative, antiſeptic, antiſpaſmodic, emmenagogue, anthelminthic, reſolvent, and rubefacient. They are employed chiefly in the form of an infuſion or decoction, and that againſt amenorrhæal hyſteria, and ſpaſm, headach, hiccup, epilepſy, and flatulence. Externally, it forms an application in ægena and putrid ulceration of fevers attended with caries. It is prepared in the form of vinegar, volatile oil, water, conſerve, and extract.

CCCCLXIII.

Toluifera Balſamum (*Balſam of Tolu*).

Cor. petala infimo majore, cal. campanulata, ſtilo o.

The balſam from this South American tree poſſeſſes a particular aromatic ſmell. Its virtue reſides in a reſinous principle, mixed with benzoic acid, It is ſtimulant and diuretic, and employed in gonorrhœa, in cold affections of the bowels, in catarrhal conſumption, and in ulcers and wound. Its forms are a tincture and ſyrup.

CCCCLXIV.

Hæmatoxylum.

Piſtilli ſtigma emarginatum ſiliqua valvis navicularibus.

Hæmatoxylum Campechianum (*Log-wood*).

This wood poſſeſſes a ſtyptic taſte and dying quality. It proves tonic and aſtringent. It is

used towards the end of dysentery in the form of decoction, the proportion being 2 ounces to 2 lbs., reduced by boiling to 1; and in extract, from 10 to 40 grains the dose.

CCCCLXV.

Sinutinia.

Nect. tubulosum, 10-dentatum, caps. lignum 5-valv. sem. imbricata.

Sinutinia Mahogani (Mahoghany Tree).

The bark, the part used, possesses a bitter styptic taste. It is used as a tonic, like the Peruvian bark, and is therefore substituted for it.

CCCCLXVI.

Quassia (Quassy).

Caps. 5. bivalves, 1 spermæ insertæ receptaculo carnoso.

Quassia Amara (Bitter Quassy).

The wood of this tree possesses a strong and purely bitter taste, without any smell. It is stomachic, antacid, and antiseptic. It is employed in dyspepsia, intermittents, gout, and leucorrhæa. Its form is that of decoction or infusion, in the proportion of 2 drams, or half an ounce to the lb. of fluid. Four grains are the dose of the powder. It is also prepared in extract.

CCCCLXVII.

Quassia Semaruba (Winged Leaved Quassy).

The bark of this West India tree is the part used. It is a pure bitter like the former, and

without ſmell. It is ſtomachic, ſlightly aſtringent, and diuretic. It is uſed in dyſpepſia, diarrhæa, chronic dyſentery, and intermittents. Its forms are, the powder in a doſe, half a dram; the decoction in the proportion of two drams, or half an ounce to the lb. of fluid.

CCCCLXVIII.

Ledum.

Cor. plano, 5 partita capſ. 5 locul. polyſperma.

Ledum Paluſtre (Marſh Ledum).

The leaves and flowers are the parts uſed. They have a bitteriſh aſtringent taſte, with an odorous ſmell. Their principle reſides in a narcotic oil, and a bitter extract. They are narcotic and ſudorific. They are employed in leproſy, itch, tinea, chincough, and againſt vermin. The form is that of infuſion, in the proportion of half an ounce, or an ounce, to the lb. of fluid, uſing half a lb. of it a day.

CCCCLXIX.

Flores Monopetali Æquales.

Rhododendron.

Cor. infundibulif. ſtamina declinata, capſ. 5 locularis.

Rhododendron Cryſantheum.

The roots and plant are both uſed. It is a ſhrub, the production of the Northern mountains of Aſia, having a bitter ſtyptic taſte, and its principle reſides in a bitter aſtringent narcotic ex-

tract. Its qualities are sudorific and astringent. It is employed in gouty rheumatism, in stiffness of joints, in contraction, and in palsy. Its form is that of infusion, in the proportion of two drams, or half an ounce, to nine or twelve ounces of fluid, taking every morning two ounces for a dose.

CCCCLXX.

Arbutus.

Cor. ovata basi diaphana, bacca 5-locularis.

Arbutus Uva Ursi (Bear's Whortleberry).

The leaves of this shrub, which grows in sandy hills, is the part used. They possess a bitter styptic-taste, and are without smell. In their qualities they are astringent and diuretic. They are employed in urinary calculus, and in ulcers of the reins and bladder. The dose is from twenty grains to two drams.

CCCCLXXI.

Styrax (Storax).

Cor. infundibilif. drupa disperma.

Styrax Officinalis (Common Storax).

This concrete balsam possesses an acrid taste and a fragrant ambrosial smell. It is stimulant and nervine; and externally it is used for fumigations and plasters.

CCCCLXXII.

Styrax Benzoin (Benjamin).

This concrete balsam is of two kinds, a whitish

pure kind, and a colored, or impure. It has an acrid pungent taſte, with a fragrant ambroſial ſmell. Its qualities are ſtimulant, nervine, and expectorant. Its virtue reſides in a peculiar acid and a reſinous principle. The acid is uſed in affections of the breaſt, connected with phlegm; externally, it is employed in redneſs of the face, and for fumigation. The doſe of the acid ſalt is from 15 grains to half a dram. Its preparations are the flowers and tincture.

CCCCLXXIII.

Flores Apetali Superi incompleti.

Copaifera.

Cal. o., cor. 4 petala.

Copaifera Officinalis (*Balſam Capivi*).

This balſam, along with a fragrant ſmell, has an aromatic, ſlightly acrid, and bitteriſh taſte, giving even the urine the ſame impreſſion. Its quality reſides in a reſinous principle, and its appearance is yellowiſh, with much conſiſtence and tenacity. It is ſtimulant and diuretic, and employed in gonorrhœa, leucorrhæa, atonic diſeaſes of the lungs, reins, and liver, and after the operation of circumciſion. Its doſe is from 30 to 40 drops twice a day in a proper vehicle.

CCCCLXXIV.

2. Of the order of digynia, or plants which have two ſtiles, three are only in medicine.

CCCCLXXV.

Saponaria (*Soapwort*).

Cor. 5 petala, cal. tubuloſus, baſi nudus, capſ. 1. locul. oblonga.

Saponaria Officinalis (*Common Soapwort*).

The root and leaves of this perennial plant are the parts uſed. The former, when recent, has a ſlightly acid and bitter taſte; and, when beat, has a ſperma or froth, like ſoap. Its qualities are diuretic and anthelminthic. It is employed in cutaneous diſeaſes, in gonorrhœa and lues, and in jaundice, and alſo in ſome phagedenic ulcers. Its form is that of decoction.

CCCCLXXVI.

3. Of the order of trigynia and tetragynia, there are no medical articles of this claſs; but of the Pentagynia, or ſuch plants as have five ſtiles, there are,

CCCCLXXVII.

Sedum.

Capſ. 5 ad nectaria, cor. 5 petala.

Sedum Acre (*Wall-ſtone-crop*).

The recent plant and expreſſed juice are uſed. Their quality reſides in an acrid and gently cauſtic principle. They prove diuretic and emetic. Externally, the recent plant, bruiſed, is applied to cancer and phagedenic ulcers.

CCCCLXXVIII.

Oxalis (*Sorrel*).

Capſ. 5 locular. angulata, cor. baſi ſub-cohærens.

Oxalis Acetocella (*Common Wood-Sorrel*).

The leaves and recent plant are uſed. They poſſeſs an intenſely acid, but agreeable taſte. Their principle reſides in a peculiar acid. They are refrigerant, and employed in fevers; and externally, in the form of cataplaſm, to ſcrofulous glandular ulcers. The preparations of this plant are, ſalt of ſorrel, its conſerve, and ſyrup.

CCCCLXXIX.

4. Of the order of decagynia, or ſuch plants as have ten ſtiles, there is one medical article.

CCCCLXXX.

Phytolacca.

Cal. 5 phyllus corollinus, cor. nulla, bacca 10 cocca.

Phytolacca Decandra (*Virginian Poke-weed*).

The expreſſed juice of this perennial plant is moſt uſed. In its full grown ſtate it is acrid to the taſte, and employed as a gentle cauſtic and remedy againſt cancer; and the manner of uſing it is by pouring the expreſſed juice by drops upon the ulcer.

CCCCLXXXI.

Class XI. Dodecandria.

This claſs conſiſts of ſuch plants as bear hermaphrodite flowers, furniſhed with any number of

ſtamina, from 12 to 19 incluſive. The orders of this claſs are five.

CCCCLXXXII.

1. The firſt, or monogynia, comprehends ſuch plants as have but one ſtile; the medical articles of which are:

CCCCLXXXIII.

Aſarum (*Aſarabacca*).

Cor. o. cal. 3-fidus ſuperus, capſ. 6-locularis.

Aſarum Europæum (*Common Aſarabacca*).

The fibres of the root and leaves are the parts uſed. They poſſeſs, with a fragrant ſmell, an acrid, nauſeous, bitteriſh taſte. Their virtue reſides in an acrid volatile principle; and they prove emetic, cathartic, errhine, diuretic, ſudorific, and emmenagogue. They are uſed in dropſy and intermittents; externally, as an errhine in headach. Their internal form is that of decoction, in the proportion of 2 drams to a lb. of water, taking an ounce every two or three hours.

CCCCLXXXIV.

Winterana.

Cor. 5-petala, cal. 3 lobus inferus, bacca 3-locularis, 2 ſpe ma.

Winterana Canella (*Laurel-Leaved Canella*).

The inner bark of this Weſt Indian tree is the part uſed. To the taſte it is ſlightly acrid and bitteriſh. Its qualities are ſtimulant and carminative. It is employed in dyſpepſia in the form

of a powder, to a dose of 30 grains; and in the infusion, in a proportion of half a dram, or 2 drams to the lb. of fluid.

CCCCLXXXV.

Lythrum.

Cor. 6 petala, cal. 12-fidus inferus, caps. 2-locularis.

Lythrum Salicaria (*Purple Willow Herb*).

The leaves and root of this perennial plant are the parts used. They possess a styptic quality, and are employed in diarrhæa, chronic dysentery, leucorrhæa, and hemoptysis.

CCCCLXXXVI.

Garcinia.

Cor. 4 petala, cal. 4 phyllus inferus, bacca, 8 sperm. coronata.

Garcinia Mangostana (*Bread-Fruit Tree*).

The bark is the part used, which possesses a styptic quality, and is employed, in the form of infusion or tincture, in dysentery, tenesmus, and aphtha.

CCCCLXXXVII.

2. Of the Digynia, or second order, having two stiles, there is only one medical article.

CCCCLXXXVIII.

Agrimonia (*Agrimony*).

Cor. 5 petala, cal. 5 fidus, sem. 1. 2 sperm.

Agrimonia Eupatoria (*Common Agrimony*).

This perennial plant is of an astringent quality, and is little employed.

CCCCLXXXIX.

3. Of the order of trigynia, or plants having three ſtiles, there is only the

CCCCXC.

Euphorbia (*Euphorbium*).

Cor. petal. peltatis, cal. ventricoſ. capſ. 3 cocca.

Euphorbia Officinoſum (*Official Spunge*).

The concrete juice, or gum reſin, is the part uſed. It poſſeſſes an acrid burning taſte. Its virtue reſides in an acrid reſinous principle. It proves draſtically cathartic, rubefacient, and veſicatory. Its preparations are a tincture and plaſter; the former being uſed in puncture, and the latter as an application in chronic rheumatiſm.

The different ſpecies of emphorbia are nearly ſimilar in their properties; as, *Euphorbia Lathyſis*, (*Caper Spunge*); *Euphorbia Paluſtris* (*Marſh Spunge*); *Euphorbia Hirſuta* (*Wolf Milch*); *Euphorbia Caneſcens* (*Anti-Siphylitic Spunge*); *Euphorbia Perviflora* (*id*).

CCCCXCI.

3. Of the other orders of this claſs, the only remaining article belongs to the dodecagynia, or plants having 12 ſtiles.

CCCCXCII.

Sempervivum (*Houſeleek*).

Cor. 12-petala, cal. 12-partit. capſ. 12.

Sempervivum Tectorum (*Common Houſeleek*).

The recent juice of this perennial plant is chiefly

ufed. It poffeffes an acrid auftere tafte, with a little acrimony. It proves refrigerant and aftringent, and is employed in fevers, burns, aphthæ, and corns.

CCCCXCIV.

CLASS XII. ICOSANDRIA.

This clafs confifts of fuch plants as bear hermaphrodite flowers with the following characters, a monophyllous and concave calyx, with a corolla faftened by its claws to the inner fide of the calyx, and the ftamina 20 or more. The two firft characters, however, form the diftinction. The orders of this clafs are five.

CCCCXCV.

1. The firft, or monogynia, comprehends fuch plants as have but one ftile. Of thefe the medical articles are,

CCCCXCVI.

Cactus (*Fig*).

Cal. fuperus, 1-phyllus, cor. multifida, bacca 1-locularis, polyfperma.

Cactus Opuntia (*Common Indian Fig*).

The leaves of this fhrub poffefs a mucilaginous quality; and, in the form of cataplafm, they are applied to pains, dyfentery, and rheumatifm.

CCCCXCVII.

Myrtus (*Myrtle*).

Cal. fuperus, 5-fidus, cor. fub, 5 petala, bacca 3 locularis, 1 fperma.

Myrtus Communis (*Common Myrtle*).

The leaves and berries of this tree are the

parts ufed. They poffefs an aromatic and flightly ftyptic tafte, with a fragrant fmell. In their qualities they are warming and aftringent, and employed againft profluvia.

CCCCXCVIII.

Myrtus Carophyllatus (*Weft India Myrtle*).

The bark is the part ufed. It has an aromatic pungent tafte, with a fragrant fmell. It poffeffes ftomachic qualities.

CCCCXCIX.

Myrtus Pimenta (*Long-Leaved Pimento*).

The berries are the part ufed. Their tafte is aromatic, with a grateful fragrant fmell. Their virtues are, warming, ftomachic, and ftimulant. They are chiefly ufed as a feafoning to food.

D.

Punica.

Cal. fuperus, 5-fidus, cor. 5 petala.
pomum 10 loculare, polyfpermum.

Punica Granatum (*Common Pomgranate*).

The petals of the flowers, the bark of the fruit, and the feeds, are all ufed. They poffefs a ftyptic tafte, are aftringent, diuretic, and anthelminthic. In the form of decoction, or infufion, they are externally ufed as a fomentation, injection, or gargle, in prolapfus, laxity of the uvula, and gonorrhæa. Internally, they are ufed in diarrhæa. The proportion of the flowers, or bark, is an ounce to one pound of fluid.

DI.

Amygdalus (Almond).

Cal. inferus, 5-fidus, cor. 5 petala. drupa, nucleo foraminulofo.

Amygdalus Communis (Common Almond).

The variety of which is the bitter and fweet. Their quality refides in a fixed oil. They are nutritive, lubricating, and emollient. The fweet kind are employed in fevers and cough in the form of emulfion, the bitter in drunkennefs and worms. The oil is the chief preparation.

DII.

Amygdalus Perfica (Peach Tree).

The recent flowers and fruit are the parts ufed. In their quality, the nuts are oily and mucilaginous, and the fmell of the flowers is peculiar.

DIII.

Prunus.

Cal. inferus, 5-fidus, cor. 5 petala. drupa, nucleo integro.

Prunus Avium (Small-Fruited Cherry Tree).

The fruit has an acrid tafte, the kernels have the tafte and fmell of the laurocerafus.

DIV.

Prunus Cerafus (Cultivated Cherry Tree).

The fruit, kernel, and gum, are all ufed. The fruit has a fweetifh acid tafte, and is refrigerant. From the kernels is prepared a diftilled water, and the gum is the fame as the gum of the mimofa nilotica.

DV.

Prunus Domestica (*Common Plum Tree*).

The fruit and pulp are the parts used. They possess a mucilaginous sweet taste, with a slight acidity. They are eccoprotic, and employed in fevers and costiveness.

DVI.

Prunus Lauracerasus (*Common Laurel*).

The leaves are the part used. They are poisonous, and possess a bitter taste. Their virtue resides in a volatile oil and narcotic principle. They prove narcotic, antispasmodic, and deobstruent. The distilled water is used, in a dose of from 30 to 40 drops, in schirrus, cancer, obstruction of the liver, dysuria, siphylis, and phthisis.

DVII.

Prunus Padus (*Common Bird Cherry*).

The bark is the part used. Its taste is bitter and somewhat styptic. It is employed, in decoction, in the proportion of one ounce to a pound of fluid, and also in extract, in intermittents, and siphylis.

DVIII.

Prunus Spinosa (*Sloe Tree*).

The berries, flowers, and inspissated juice, are all used. The berries have a styptic sourish taste, the flowers a fragrant smell and bitterish taste. The berries are antiseptic, tonic, and astringent;

the flowers, eccoprotic. The fruit is uſed in bilious and putrid fevers, and in diarrhœa.

DIX.

3. Of the order of trigynia, or plants having three ſtiles, the medical articles are:

DX.

Sorbus (Service Tree).

Cal. ſuperus, 5-fidus, cor. 5 petala, bacca 3 ſperma.

Sorbus Aucuparia (Mountain Aſh).

The berries are the part uſed, the juice of which has an acid bitter taſte. In the form of rob, they are employed in dropſy, renal calculus, and obſtinate ſtrangury.

DXI.

Sorbus Domeſtica.

The fruit poſſeſſes an acid auſtere taſte, and in its qualities it is aſtringent.

DXII.

3. Of the plants which have five ſtiles, or the pentagynia, the following medical articles occur:

DXIII.

Meſembryanthemum.

Cal. ſuperus 5 fidus, cor. multifida, capſ. carnoſa, locularis polyſperma.

Meſembryanthemum Cryſtallinum (Annual Mercury).

This annual plant has an agreeable ſaline cooling taſte. The juice is uſed in ſpaſmodic pain of the bladder, dyſuria, iſchuria, calculus, and

chincough. The proportion is an ounce and a half to a pound of water.

DXIV.

Pyrus (Pear Tree).

Cal. fuperus, 5-fidus, cor. 5 petala.
pomum 5-loculare polyfpermum.

Pyrus Communis (Common Pear Tree).

The fruit of this tree poffeffes a fweetifh ftyptic tafte, and is nourifhing.

DXV.

Pyrus Cydonia (Common Quince Tree).

The fruit, feeds, and bark, are all ufed. The fruit has a grateful fmell, with an acid ftyptic tafte. The feeds are mucilaginous. The quality of the fruit is aftringent and cooling, the feeds are emollient, and the bark is emmenagogue. The rob and mucilage are its preparations.

DXVI.

Pyrus Malus (Apple Tree).

The fruit poffeffes an acid fweet tafte. They are eccoprotic and refrigerant. In the form of cataplafm they are employed in ophthalmia and putrid ulcers; in decoction, they are exhibited in fevers.

DXVII.

Spiræa.

Cal inferus, 5-fidus, cor. 5 petala.
capf. plures congeftæ.

Spiræa Filipendula (Single Flowered Dropwort.)

The root and plant are ufed. Their qualities

are aſtringent, and they are employed in leucorrhæa and hernia.

DXVIII.

Spiræa Ulmaria (*Meadow Sweet*).

The root and leaves are here uſed. They poſſeſs a fragrant ſmell and ſtyptic taſte. They are aſtringent and ſudorific, and employed in dyſentery and hernia.

DXIX.

4. Of the order of polygynia, or plants having many ſtiles, the following are the medical articles:

DXX.

Roſa (*Roſe*).

Cal. 5-fidus, cor. 5 petala. cal. baccatus polyſpermus.

Roſa Canina (*Wild Roſe*).

The fruit from the ſeeds is the part uſed. It poſſeſſes a fragrant ſmell, with a ſweetiſh ſtyptic taſte. In its qualities it is eccoprotic. It is employed in rob, conſerve, and decoction.

DXXI.

Roſa Gallica (*Red Roſe*).

The petals of this ſhrub are the parts uſed. They poſſeſs a fragrant ſmell, and a ſlightly ſtyptic taſte. They are chiefly uſed as a coſmetic, and alſo in profluvia. Their form is the watery infuſion, conſerve, and ſyrup.

DXXII.

Rosa Damascena (*Damask*).

The parts used are the same as in the former, and the qualities are also the same.

DXXIII.

Rubus.

Cal. 5 fidus, cor. 5 petala. bacca composita.

Rubus Idæus (*Raspberry*).

The recent fruit of this perennial shrub is the part used. It possesses a sweetish acid taste, with a grateful fragrant smell. It is refrigerant, and employed in fevers and scurvy. Its preparations are a water, juice, rob, and vinegar.

DXXIV.

Rubus Chamænosus (*Bramble*).

The recent berries possess an acid taste, with a fragrant smell. They are employed in synochus and bilious fevers.

DXXV.

Fragaria.

Cal. 10-fidus, cor. 5 petala, sem. plurima supra recept. baccatum decidu.

Fragaria Vesca (*Strawberry*).

The recent fruit, and also the root and plant, are used. The fruit has a sweetish acidulous taste, with a fragrant smell. The root and plant are a little astringent. The qualities of the fruit are diuretic, eccoprotic, and refrigerant.

DXXVI.

Potentilla.

Cal. 10-fidus, cor. 5 petala, fem. plurima mutica.

Potentilla Anſerina (*Common Cinquefoil*).

The root and plant are both uſed. They are aſtringent, and uſed in the chronic ſtate of dyſentery.

DXXVII.

Tormentilla.

Cal. 8-fidus, cor. 4 petala, fem. 8 mutica

Tormentilla Erecta (*Common Septfoil*).

The root is the part of this perennial plant uſed, which is red and ſtyptic. In its qualities it is tonic and aſtringent, and employed in menorrhœa and diarrhœa, and joined with gentian in intermittents.

DXXVIII.

Geum.

Cal. 10-fidus, cor. 5 petala, fem. plurima ariſta geniculata.

Geum Rivale (*Waters Avens*).

The root of this perennial plant poſſeſſes a taſte bitteriſh and ſomewhat ſtyptic. It is employed in diarrhœa, chloroſis, and intermittents; externally, in powder to venereal ulcers. The doſe is from two ſcruples to a dram of the powder; and, of the decoction, the proportion is half an ounce to one pound of fluid.

DXXIX.

Geum Urbanum (*Herb Bennet*).

The root and its fibres, the parts ufed, are fomewhat aromatic and bitterifh, with fomething of the fmell of cloves. Their virtue refides in an aftringent principle, with a little volatile oil. They are tonic and antifeptic, and they are employed in place of the bark in obftinate intermittents, low fevers, dyfpepfia, diarrhæa, amenorrhæa, and chlorofis. The forms are the powder in a dofe of a dram, in decoction, the proportion being an ounce to one pound of fluid, in extract, and in tincture in dofes of half an ounce.

DXXX.

Class XIII. Polyandria.

This clafs contains fuch plants as bear hermaphrodite flowers furnifhed with many ftamina, and the orders are feven.

DXXXI.

1. Of the firft order, or monogynia, comprehending fuch plants as have one ftile, the medical articles are:

DXXXII.

Tetropetali.

Capparis.

Cal. 4-phyllus, bacca pedicillata corticofa.

Capparis Spinofa (*Prickly Caper Bufh*).

The bark of the root is the part ufed. It pof-

sesses a bitterish taste, and is a little styptic. Its qualities are astringent and diuretic. It is used in abdominal fullness and palsy. Its preparation is a fixed oil.

DXXXIII.

Chelidonium.

Cal. 2 phyllus, siliqua.

Chelidonium Majus (*Common Celadine*).

The root and recent plant are both used. Its taste is bitterish and acrid, with a yellow juice. Its virtue lies in an acrid volatile principle. In the form of decoction it is used internally in cachexy, consumption, jaundice, dropsy, and cutaneous diseases.

DXXXIV.

Papaver (*Poppy*).

Cal. 2-phyllus, capsula 1-locularis coronata.

Papaver Rhœas (*Common Red Poppy*).

The flowers of this annual plant are used. They are bitterish, possess a slight narcotic quality, and form a bright red syrup.

DXXXV.

Papaver Somniferum (*Sleepy Poppy*).

This annual plant, the natural produce of Egypt and Asia, is chiefly used in the gum resin, or concrete exudation, named opium. It possesses a nauseous acrid bitter taste, with a stinking smell. Its virtues reside in a narcotic principle, united with a volatile gum resin. Its qualities are nar-

cotic, ſudorific, and obſtipating. In a large doſe it is ſtimulant and cordial. Its exhibition is very general in all caſes of pain from irritation or ſpaſm in the end of acute inflammation, in intermittents before the fit, in chronic dyſentery, in diarrhæa and cholera, in cough from an acrid phlegm, in painful lochia and hemorrhage from local irrita-tion or ſpaſm, in painful menſtruation and atonic gout, in the end of rheumatiſm, in aſthma, in hyſteria, in gravel, heartburn, and colic, in aſthma, and convulſion, in gonorrhæa and hernia humoralis, in obſtinate venereal ulcers, in phagedenic ſores, and the gangrene of age. The doſe is from one to 15 grains a day. Its forms are, a watery and vinous ſolution, extract, ſyrup, and decoction of the heads. Externally, it is employed in the form of glyſter, fomentation, and liniment.

DXXXVI.

Gambogia (*Gamboge*).

Cal. 4-phyllus, bacca 8-ſperma, 8-angularis.

The inſpiſſated juice of the branches of this Indian tree is the part uſed. It is dark coloured and yellow at the ſame time, inſipid, and in-odorous. Its virtue reſides in a reſinous gummy principle. It is draſtically cathartic, diuretic, and ſlightly emetic. It is employed in dropſy, coſtive-neſs, tenia, jaundice, quartan fever, cachexy, and cutaneous diſeaſes. From 3 to 4 grains is the

dose in dropsy, from 10 to 20 in worms, and from 1 to 2 grains in costiveness. The dose of its tincture is from 1 to 2 drams. Where too powerful, its antidote is an alkali.

DXXXVII.

Caryophyllus.

Cal. superus, bacca 1-sperma coronata.

Caryophyllus Aromaticus (*Cloves*).

The flowers, with the immature pericarpium, are the parts used. Their taste is aromatic, acrid, and pungent, with a grateful fragrant penetrating smell. Their virtue resides in a volatile and acrid resinous principle. They are stimulant, calefacient, sialogogue, stomachic, and emmenagogue. They are employed in dyspepsia, lingual palsy, and toothach. The dose is from a scruple to a dram in powder or infusion, watery or vinous. The volatile oil is their only preparation.

DXXXVIII.

Tilia.

Caps. 5-locularis coriacea, 1 sperma, cal. deciduus.

Tilia Europea (*Common Lime Tree*).

The flowers are used, which have a fragrant smell, and are antispasmodic. The infusion and distilled water are given in spasms.

DXXXIX.

Myristica Aromatica (*Nutmeg*).

The fruit, and skin of it called mace, are the parts used. It possesses a pleasing bitterish aromatic styptic taste, with a fragrant smell. Its virtue resides in a volatile oil, and fixed aroma. It is stimulant, stomachic, carminative, obstipating in a large dose, hipnotic, and sedative. It is exhibited in dyspepsia, flatulence, colic, diarrhæa, and strangury. The dose is from 4 grains to 20. The preparations are the candied fruit, a volatile oil, and also a fixed oil.

DXL.

Cistus.

Caps. subrotunda, cal. 5-phylli fo-
liist. 2 minor.

Cistus Creticus (*Gum Cistus*).

The exudation from the leaves is the part used. It is a bitter resin, of a stimulant and aromatic nature, used for plasters and fumigations, having a pleasing smell.

DXLI.

Thea (*Tea*).

Cal. 5, s. 6 phyllus, petala 6, s. 9,
caps. 3 locul. sem. solitaria.

Thea Bohea (*Broad and Narrow Leaved Bohea*).

The leaves of this shrub, the parts used, have a slightly astringent taste, and grateful smell. In their qualities they are astringent, and hurtful to the relaxed.

DXLII.

Thea Viridis (Green Tea).

The leaves have the fame tafte as the former, with a more fragrant and grateful fmell.

DXLIII.

Bixa.

Cal. 5-dentatus, cor. 5 petala duplex, capf. 2-valvis.

Bixa Orellana (Anotto).

The root and feculum of the capfules is the part ufed. The feculum is red, with a flight bitter and ftyptic tafte. The quality of the root is diuretic. Both parts are ufed as a dye.

DXLIV.

2. Of the plants that have two ftiles, or digynia, the only medical article is:

DXLV.

Pogonia.

Cal. 5-phyllus, cor. 5 petala, capf. polyfperma, fem. colorata.

Pæonia Officinalis (Common Peony).

The root, flower, and feed, are all ufed. The recent root has a rank ftinking fmell; when dried, it has a farinaceous and fomewhat ftyptic tafte. It is narcotic, antifpafmodic, and aftringent. It is employed in epilepfy and intermittents.

DXLVI.

3. Of the plants having three ftiles, or trigynia, the articles are:

DXLVII.

Delphinium.

Cal. nullus, cor. 5 petala, supremo cornuto nectar, 2-fidum, sessile.

Delphinium Staphisagria (Stave-Acre).

The seeds are the part used. They have a bitter acrid nauseous taste. Their virtue is drastically cathartic, anthelminthic, and a specific against vermin. They are used chiefly in the form of ointment with this last view.

DXLVIII.

Aconitum.

Cal. nullus, cor. 5 petala. supremo galateo nectar, 2 pedicillata.

Aconitum Anthora (Aconite).

The root of this poisonous plant possesses an acrid bitter taste. It is cathartic and anthelmenthic.

DXLIX.

Aconitum Cammarum (Purple Wolfsbane).

The leaves and plant possess an acrid taste and nauseous smell. Its virtue resides in an acrid principle. It is sudorific and diuretic. It is employed in chronic rheumatism, in amaurosis, and obstinate ulcers.

DL.

Aconitum Napellus.

This species is only weaker than the former. Its antidote is the ranulculus thora.

DLI.

4. Of the plants that have four ſtiles, or tetragynia, there is only one medical article:

DLII.

Cimicifuga.

Cal. 4 phyllus, cor. nectariis, 4 urceolatis, capſ. 4 ſem. ſynamoſæ.

Cimicifuga Fœtida.

This Siberian plant has a bitter taſte and rank ſmell. It is antiſpaſmodic and reſolvent. It is employed in ſpaſms and bronchocele.

DLIII.

5. Of the plants that have five ſtiles, or pentagynia, the medical articles are:

DLIV.

Aquilegia (*Colombine*).

Cal. nullus, cor. 5 petala nectaria, 5 inferne cornuta

Aquilegia Vulgaris (*Common Colombine*).

The plant, flowers, and ſeed, are all uſed. It is of a poiſonous nature, the ſeeds are mucilaginous and oily. The plant is employed in jaundice and cutaneous diſeaſes.

DLV.

Nigella.

Cal. nullus, cor. 5 petala. nectaria, 8 ſuperne, 2 labiata.

Nigella Sativa (*Small Fennel Flower*).

The ſeeds of this poiſonous plant are the parts uſed. Their taſte is acrid and aromatic, with a

fragrant ſmell. Their virtue reſides in a volatile and fixed oil. They are ſtimulant, lactiferous, errhine, ſialogogue, emmenagogue, and anthelminthic.

DLVI.

5. Of the order of polygynia, or plants having many ſtiles, the articles are numerous.

DLVII.

Illicium.

Cal. 6 phyllus, cor. pet. 27, capſ. 1, ſpermæ in orbem.

Illicium Aniſatum (*Indian Aniſe*).

The fruit and ſeed of this Chineſe tree are the parts uſed. They poſſeſs an aromatic ſweet taſte, like aniſe, with a fragrant aromatic ſmell. They are ſtimulant, ſtomachic, carminative, and expectorant. They are employed in atonic diſeaſes of the lungs, and are often mixed in infuſion with tea, to render it more grateful. The forms are, the powder in a doſe of 30 grains, or the infuſion in the proportion of a dram to 1 lb. of fluid.

DLVIII.

Anemone.

Cal. nullus, cor. 6 petala, ſem. plurima.

Anemone Hepatica.

The root and flowers are both uſed, which are inſipid and inodorous.

DLIX.

Anemone Nemorosa (Wood Anemone).

The plant and recent flowers are both ufed. In its nature it is poifonous. Its virtue refides in a volatile acrid principle. Externally, it is employed, in the place of cantharides, in headach, tertian, chronic rheumatifm, and ifchias.

DLX.

Anemone Pratenfis (Meadow Anemone).

The plant is ufed. It is very acrid and poifonous; and its virtue refides in an acrid principle. It is corrofive, rubefacient, refolvent, and diuretic. The infpiffated juice is ufed in amaurofis and palfy, from 1 to 8 grains; and in infufion, in the proportion of 1 and 3 drams to 1 lb. of fluid. Externally, this plant is applied in ulcerations, herpes, and caries.

DLXI.

Clematis.

Cal. nullus, cor. 4. petala, fem. plurima arillata.

Clematis Recta (Upright Virgin's Bower).

The plant and flowers are ufed. Their virtue refides in an acrid principle. They are corrofive, veficant, and diuretic. They are employed in venereal exiftofes; and the powder is externally applied to venereal, phagedenic, and cancerous ulcers. The dofe of the extract is from 1 to 3 grains; and the infufion is made in the proportion of

2 and 3 drams of the dried plant to 1 lb. of fluid.

DLXII.

Clematis Vitalba (Common Virgin's Bower).

The leaves are the part ufed. They poffefs an acid fweetifh ftyptic tafte. Their virtue refides in an acrid principle. They are aftringent, corrofive, and diuretic. The infufion is ufed in dropfy; and the juice, mixed with oil, is an application in itch.

DLXIII.

Ranunculus.

Cal. 5 phyllus, cor. 5 petala. fem. plurima, cor petala. ungue nectarif.

o *Ranunculus Abortivus.*

The leaves are the part ufed. They are acrid and veficant, and employed in fiphylis.

DLXIV.

Ranunculus Flammula.

The leaves and young ftalks are here ufed, which are acrid and corrofive. They are employed externally in chronic rheumatifm, and to the wrifts to fufpend the attack of intermittents. The diftilled water is cauftic. Several other fpecies of ranunculus agree with this in their qualities, as alpinus, arvenfis, bulbofus, illyricus, lingua, fceleratus thora.

DLXV.

Ranunculus Ficaria (*Leffer Celadine*).

The recent root of this perennial plant is ufed as a cofmetic. In its nature it is infipid.

DLXVI.

Heleborus.

Cal. nullus, cor. 5 petalo periofteus, polyfpermæ nectaria plura.

(*Heleborus Fœtidus*) *Fœtid Hellebore*.

The plant, leaves, and expreffed juice, are all ufed. Their tafte is acrid, bitter, and naufeous, with a rank fmell. They are emetic, cathartic, anthelminthic, and deobftruent. They are employed in afthma, hypochondriafis, hyfteria, abdominal obefity, and worms.

DLXVII.

Heleborus Niger (*Black Hellebore*).

The fibres of the root are the parts ufed. Their tafte is bitterifh and acrid, with a fœtid naufeous fmell. Their virtue refides in an acrid principle, united with a mucilage and refin. In their recent ftate they are drafticallly cathartic, diuretic, emmenagogue, anthelminthic, and deobftruent. They are employed in amenorrhæa, melancholy, mania, cutaneous difeafes, quartans, dropfy, worms, and itch. The forms of ufing it are, the powder in a dofe of 3 to 30 grains; the infufion, in a proportion of 3 drams to 1 lb. of fluid; the tincture, in dofes of 1 dram; and extract, from 4 grs. to half a dram.

DLXVIII.

Heleborus Viridis (*Green Hellebore*).

The tafte is more bitter, acrid, and naufeous than the former; in their qualities they agree.

DLXIX.

CLASS XIV. DIDYNAMIA.

This clafs confifts of fuch plants as bear hermaphrodite flowers furnifhed with four ftamina, two of which are larger than the reft, and form their leading character. This clafs comprehends two orders.

DLXX.

1. The firft is the gymnofpermia, or plants that have naked feeds; the medical articles of which are:

DLXXI.

Teucrium.

Corollæ lab. fuperius, nullum fed bipartitum.

Teucrium Chamydrys (*Common Germander*).

This perennial plant has a bitter aromatic tafte, with an aromatic fragrant fmell. It is ftimulant, emmenagogue, and difcutient. It is employed in infufion in intermittents, gout, and chlorofis.

DLXXII.

Tenerium Chamæpitys (*Ground Pine Germander*).

This annual fpecies has the fame bitter aromatic tafte, with a refinous fmell. It is ftimulant, ftomachic, emmenagogue, and difcutient.

The infusion is used in chronic rheumatism and gout, in the proportion of 2 or 3 drams to 1 lb. of fluid.

DLXXIII.

Teucrium Criticum.

The herb and tops are the parts used. Their qualities are stomachic, and they are employed in jaundice.

DLXXIV.

Teucrium Marum (Cat Thyme).

The same parts are used as in the former species. They possess an acrid bitter taste, with a fragrant camphorated smell. Their virtue resides in a volatile camphorated resin. They are nervine, antispasmodic, cortical, errhine, and discutient. They are exhibited in spasms, hysteria, cachexy, sapose diseases, want of smell, and asthma. Their forms are that of powder, in 20 or 30 grains; and infusion, in the proportion of 2 ounces, or 3, to a lb. of fluid.

DLXXV.

Teucrium Scordium (Water Germander).

This perennial plant is all used. Its taste is aromatic, bitter, and acrid. Its qualities are stomachic, sudorific, anthelminthic, and discutient. It is employed, externally, in the form of a venous or occetous infusion in ecchyma, gangrene, and ulceration.

DLXXVI.

Satureja.

Corolla laciniis fubæqualibus, ftamina remota.

Satureja Hortenfis (*Summer Savory*).

The plant is all ufed. It has an aromatic tafte and fragrant fmell. It is nervine, ftimulant, emmenagogue, ftomachic, and aphrodifiac. It is chiefly employed in amorexia and impotence.

DLXXVII.

Hyffopus.

Filamenta, diftantia, recta; cor. ringens.

Hyffopus Hortenfis (*Common Hyffop*).

This plant has a bitter and fomewhat aromatic tafte, with a nidorous fmell. Its virtue refides in a volatile oil, with a bitter extractive principle. It is ftomachic, greatly ftimulant, expectorant, and refolvent. Its infufion is employed in catarrhal affections of the lungs, and in ecchymomum.

DLXXVIII.

Nepeta.

Corollæ lab. inferus crepatum; faux margine reflexo.

Nepeta Cataria (*Common Cat Mut*).

This perennial plant has a naufeous bitter tafte, and a goatifh fmell, very agreeable to the faline tribe. It is nervine, emmenagogue, and anthelminthic. It is exhibited in hyfteria and chlorofis.

DLXXIX.

Lavandula.

Corolla resupinata.

Lavandula Spica (Common Lavender).

The flowers are the part used. They possess a bitter aromatic taste, and fragrant smell. Their virtue resides in a copious volatile oil. They are stimulant, nervine, and resolvent. They are employed in palsy, aphonia, and baldness. Their preparations are in volatile oil, water, spirit, and compound tincture.

DLXXX.

Mentha.

Filamenta distantia, recta; cor. subaequalibus.

Mentha Auricularis.

This Oriental species is fragrant and bitter. In its powers it is deobstruent, and employed against tumors.

DLXXXI.

Mentha Cervina (Hyssop-Leaved Mint).

This species possesses an aromatic taste and fragrant smell.

DLXXXII.

Mentha Crispa (Curled Mint).

The leaves and plant are both used. They possess an aromatic taste, with a fragrant smell. Their virtue resides in a volatile oil. They are stimulant, carminative, emmenagogue, antiphrodisiac, and resolvent. They are employed in

headach, in hyfteria, anarexia, vomiting, cholic, chincough, and filynafis. Externally, in pains of the joints from fpafms, in milk coagulations in the breaft, in ecchymome, and in cold tumors. The proportion of the infufion is an ounce to 1 lb. of fluid. The preparations of this plant are in volatile oil, fpirit, water, conferve, and fyrup.

DLXXXIII.

Mentha Piperita (*Peppermint*).

This perennial fpecies has an acrid aromatic tafte, with a fenfe of coldnefs, and a fragrant fmell. Its virtue refides in a volatile camphorated oil. Its qualities are the fame as the former fpecies, and it is employed againft the fame difeafes, and under the fame forms.

DLXXXIV.

Mentha Pulegium (*Penny-Royal Mint*).

It is much the fame as the mentha crifpa.

DLXXXV.

Mentha Viridis (*Spear Mint*).

This fpecies alfo refembles the mentha crifpa.

DLXXXVI.

Glecoma.

Antherarum paria cruciata.

Glecoma Hederacea (*Ground Ivy*).

This perennial plant poffeffes a bitterifh and acrid tafte. It is expectorant and tonic. The infufion in milk, or water, is employed in the

end of catarrh, and the ulcerated ſtage of conſumption.

DLXXXVII.

Betonica.

Corollæ lab ſuperius planum, aſcendens, tubo cylindrico; ſtam. longitudine faucis.

Betonica Officinalis (Wood Betony).

The plant, flowers, and root, are all uſed. They poſſeſs a nidorous ſickly ſmell. They are nervine, and but little employed.

DLXXXVIII.

Marrubium.

Calyx 10-ſtriatus; corollæ lab ſuperius fornicatum.

Marrubium Vulgare (Common White Hoarhound).

The plant and recent juice are both uſed. Its taſte is bitteriſh, ſaline, and unpleaſant, with a rank ſmell. It is expectorant, emmenagogue, and anthelminthic. It is employed in moiſt aſthma, in jaundice, chloroſis, abdominal fullneſs, and mercurial ptyatiſm.

DLXXXIX.

Calyces Bilabiati.

Origanum.

Strobilus calyces colligens.

Origanum Creticum (Dittany of Crete).

The ſpicæ of this perennial plant are the parts uſed. Their taſte is acrid, aromatic, and bitter. Their ſmell is grateful and fragrant. They are ſti-

mulant, emmenagogue, and refolvent. It is employed, in the form of a volatile oil, in toothach, and alfo in the baths.

DXC.

Origanum Dictamnus (*Dittany of Candia*).

The leaves are the part ufed. They poffefs an aromatic warm tâfte, with a fragrant fmell. Their virtue refides in a volatile oil. They are ftimulant, nervine, ftomachic, emmenagogue, and refolvent.

DXCI.

Origanum Marjorana (*Sweet Marjoram*).

This plant has an aromatic tafte, with a fragrant grateful fmell. Their virtue refides in a volatile oil. They poffefs the fame qualities as the former fpecies, and are employed in anafmia and coryza. Their preparation is a volatile oil.

DXCII.

Origanum Vulgare (*Common Marjoram*).

The tafte of this plant is aromatic, bitterifh, and fomewhat acid. The fmell is fragrant and grateful. Its virtue refides in a volatile oil. It is ftimulant, nervine, and refolvent. It is employed in cough, pulmonary confumption, chlorofis, and œdema. It is frequently ufed in broths, and as a fubftitute for tea. Its preparation is a volatile oil.

DXCIII.

Thymus.

Calyx fauce villis clausus.

Thymus Serpyllum (*Wild Thyme*).

This plant has a taste somewhat styptic, with a fragrant aromatic smell. Its virtue resides in a volatile oil. It is stimulant, nervine, stomachic, and resolvent. It is employed in headach after a debauch, and in uterine baths. Its preparation is a volatile oil.

DXCIV.

Thymus Vulgaris (*Garden Thyme*).

This plant has a fragrant aromatic smell, and its virtue resides in a volatile oil. It is nervine, stomachic, emmenagogue, carminative, and resolvent. It is employed in leucophlegmosia, coryza, and epiphora.

DXCV.

Melissa.

Cal. angulatus striosus, labio superiore ascendente.

Melissa Calamintha (*Mountain Balm*).

This plant possesses a slight aromatic taste, with a weak smell of citron. It is stomachic, expectorant, and resolvent. It is employed in asthma.

DXCVI.

Melissa Officinalis (*Common Balm*).

This perennial plant has an aromatic taste, with a fragrant smell like citron. Its virtue resides in a volatile oil. It is gently stimulant, nervine,

antifpafmodic, and emmenagogue. It is given in hyfteria, palpitation, chlorofis, and amenorrhæa Its preparations are an infufion, water fpirit, and volatile oil.

DXCVII.

Melittis.

Cal. tubo corolla amplior; corollæ lab. fuperius planum integrum, antheræ cruciatæ.

Melittis Meliffophyllum (*Baftard Balm*).

The leaves have a bitterifh tafte, and a fragrant pleafing fmell. They are employed in amenorrhæa and nephritis.

DXCVIII.

Ocymum.

Corolla refupinata, filamenta bina bafi proceffa.

Ocymum Bafilicum (*Common Sweet Bafil*).

The plant and feeds are both ufed. The former has an aromatic tafte and fragrant fmell, the latter are mucilaginous. They are nervine, and employed in vomiting and rheumatifm.

DXCIX.

2. Of the Angiofperma, or fuch plants as have feeds in a pericarpium, the medical articles are:

DC.

Anthirrinum.

Capf. 2 locularis; cor. perfonata fubtus nectario prominente.

Anthirrinum Linaria (*Yellow Toad-Flax*).

This biennial plant has a bitterifh tafte, with a

rank resinous smell. It is diuretic, eccoprotic, alterative, and resolvent. It is employed in jaundice and dropsy; and externally, in ophthalmia and swelling of the anus. Its preparation is an ointment.

DCI.

Scrophularia.

Caps. 2 locularis; cor. resupinata lab. segmento intermedia interno.

Scrophularia Aquatica (Water Fig-wort).

The leaves of this perennial plant have a bitter taste, with a weak foetid smell. Its virtue is stomachic and carminative, and it corrects the nauseous taste of senna in infusion.

DCII.

Scrophularia Nodosa (Knobby-rooted Figwort).

The root of this perennial plant possesses a bitterish nauseous taste, with a rank foetid smell, which becomes dissipated by drying. It is carminative, anthelminthic, and sudorific. It is employed in scrofula, swelling of the anus, itch, and cynanche.

DCIII.

Digitalis.

Caps. 2 locularis; cor. campan. subtus ventric. stam. declinata.

Digitalis Purpurea (Purple Fox-Glove).

The leaves of this biennial plant possess an acrid bitter nauseous taste. They are emetic, drastically cathartic, and diuretic. They are employed in

hydrothorax, dropſy, gravel, epilepſy, and mania; from venous effuſion in dyſury, pulmonary conſumption, and ſcrofula.

This medicine requires a very cautious uſe; in powder, from 1 grain to 3 or 4 is the doſe; in infuſion, the proportion is an ounce to one pound of fluid. Its preparation is a ſyrup.

DCIV.

Linnæa.

Bacca 3-locul. ſicca; cor campanul. cal. ſuperus.

Linnæa Borealis (*Two Flowered Linnæa*).

This plant has a bitteriſh and ſlightly ſtyptic taſte. The flowers have a fragrant ſmell. Its qualities are ſomewhat aſtringent and diuretic. It is employed in chronic rheumatiſm and itch. Its form is an infuſion in milk and water.

DCV.

Seſamum.

Capſ. 2 locularis; cor. campanal. inæqualis; rudim. filamenti 5ti.

Seſamum Orientale (*Oriental Seſamum*).

The ſeeds of this annual plant are oily and emollient. They are employed in pains, pruritus, maraſmus, and phlegmon.

DCVI.

Avicennia.

Capſ. 1 locul coriacea; cor. labio ſuperiore quadrata.

Avicennia Tomentoſa (*Oriental Anacordium*).

The kernels and juice of the pulp are uſed.

The former are ſweet and oily, the latter very acrid and corroſive. Hence it is uſed, mixed with lime, for imprinting indelible characters on ſilk and linen.

DCVII.

Bignonia.

Capſ. 2-locularis; cor. campanulata, ſem. alata, imbricata.

Bignonia Ophthalmica.

The root and expreſſed juice are uſed in inflammation of the ocular membranes, in the quantity of a drop or two inſerted every morning.

DCVIII.

CLASS XV. TETRADYNAMIA.

This claſs conſiſts of ſuch plants as bear hermaphrodite flowers furniſhed with ſix ſtamina, two of which are ſhorter than the reſt. The flowers, alſo, of this claſs, have a particular ſtructure. Its orders are two.

DCIX.

1. The Siliculoſa, comprehending ſuch plants whoſe pericarpium is a ſilicula, the medical articles are:

DCX.

Lepidium.

Silic. cordata; valvulis acute carinatis.

Lepidium Sativum (Garden Creſſes).

The recent plant and ſeeds are uſed. Their virtue depends on a mild acrid principle. They

are diuretic and antifcorbutic. They are employed in fcurvy, dropfy, and fome cutaneous difeafes.

DCXI.

Cochlearia.

Silic cordata; valvulis obtufis, gibbis.

Cochlearia Armoracia (*Horfe Radifh*).

The recent root and expreffed juice are both ufed. Their virtue refides in an acrid volatile principle. They are emetic, diuretic, antifcorbutic, and rubefacient. They are employed in cachexy, quartan fever, fcurvy, dropfy, pituitous afthma, palfy, chronic rheumatifm, and paraphonia. The recent root is given rafped down to two fcruples for a dofe; the expreffed juice, in half a dram in a proper vehicle. The preparations of this plant are, the juice, diftilled water, fpirit, and infufion watery and vinous.

DCXII.

Cochlearia Officinalis (*Common Scurvy Grafs*).

The recent plant and juice are both ufed. Their tafte is acrid, and their virtue refides in a volatile acrid principle. They are diuretic, antifcorbutic, and alterative. Both are employed in fcurvy and cachexy. Their preparations are, the conferve, which is given in a dofe from one to two drams; the juice, from one to three ounces.

DCXIII.

2. The fecond order, or filiquofæ, comprehends

thoſe plants whoſe pericarpium is a ſiliqua, and of this order the medical articles are:

DXCIV.

Raphanus.

Siliqua articulata.

Raphanus Sativus (Garden Radiſh).

The recent root and juice are uſed. They poſſeſs an acrid principle. They are ſtimulant, diuretic, reſolvent, and rubefacient. The expreſſed juice is employed in ſcurvy, aſthma, hoarſeneſs, and iſchuria.

DCXV.

Eryſimum.

Siliqua tetragona.

Eryſimum Alliuria (Stinking Hedge Muſtard).

This plant has an alliaceous ſmell and bitter taſte. An acrid principle diſtinguiſhes it. It is diuretic, errhine, and antiſcorbutic. It is uſed in aſthma and putrid ulcers.

DCXVI.

Eryſimum Barbarea Common (Winter Hedge Crop).

The leaves of this perennial plant have a taſte bitter and ſomewhat acrid, with an herbaceous ſmell. Their qualities are antiſcorbutic.

DCXVII.

Chieranthus.

Siliqua germine utrinque glandula notato.

Chieranthus Cheiri (Wild Wall Flower).

The flowers poſſeſs a yellow colour and fragrant

ſmell. Their virtue reſides in a volatile principle. They are nervine and narcotic, and uſed againſt pains.

DCXVIII.

Braſſica.

Glandulæ 2 intra ſtamina brevi-
ora; 2 extra ſtamina longiora.

Braſſica Oleracea (Cabbage).

The leaves are watery and inodorous. They are uſed, boiled or ſalted, under the name of ſawer kraut, in ſcurvy. The decoction is employed in hoarſeneſs, cough, ſcurvy, and burns. In the form of cataplaſm they are applied to milk breaſts.

DCXIX.

Braſſica Eruca.

The ſeeds and leaves are both uſed. They have an acrid hot taſte, and as penetrating as muſtard. Their virtue reſides in a volatile principle. They are conſidered as aphrodiſiac, and employed in lingual palſy.

DCXX.

Braſſica Rapa (White Turnip).

The recent root and expreſſed juice are uſed. Their virtue reſides in a ſaccharine and mucilaginous principle. They are flatulent and diuretic. The expreſſed juice is employed in conſumption, aſthma, and ſtrangury, and alſo in toothach and aphthæ. In the form of cataplaſm it is applied to tumors and the gout.

DCXXI.

Cardamine.

Siliqua dehiſcens; valvulis revolutis.

Cardamine Pratenſis (*Ladies Smock*).

The petals and leaves are uſed. Their virtue reſides in a ſlightly acrid principle. The petals are antiſpaſmodic, the leaves antiſcorbutic.* The former are employed in convulſion and choria, in doſes from a ſcruple to half a dram.

DCXXII.

Siſymbrium.

Siliqua dehiſcens; valvis rectiuſculis; cal. patulus.

Siſymbrium Naſturtium (*Common Water Creſſes*).

The recent plant and expreſſed juice are uſed. They poſſeſs an acrid bitteriſh taſte when chewed, ſhewing a pungency at laſt. Their virtue reſides in an acrid principle. They are diuretic and antiſcorbutic. They are uſed in ſcurvy and obſtipation. The juice is given in a doſe of two ounces.

DCXXIII.

Siſymbrium Sophia (*Flix Weed*).

The ſeeds of this annual plant are acrid and warm, and diſplay an acrid principle. They are anthelminthic.

DCXXIV.

Siſymbrium Tenuifolium.

This ſpecies is the ſame as the firſt.

DCXXV.

Sinapis.

Siliqua dehifcens.

Sinapis Alba (*White Muftard*).

The feeds and their flour are ufed, the virtue of which refides in an acrid principle, with a volatile and fixed oil. They are rubefacient and ftimulant, and externally employed in cataplafms.

DCXXVI.

Sinapis Nigra (*Common Black Muftard*).

The fame parts are ufed as in the former, and they are the fame alfo in quality, but more acrid; hence ftimulant, flightly emetic, diuretic, and cathartic: externally, rubefacient and veficatory. Internally, they are ufed in dyfpepfia, in moift afthma, in obftipation, fcurvy, dropfy, intermittents, and palfy: externally, in herpes and chronic rheumatifm.

DCXXVII.

Crambe.

Siliqua decidua, globofa, ficco-baccata; filamenta 4-apice bifurca.

Crambe Orientalis (*Colewort*).

The recent root of this perennial plant is ufed, whofe virtue refides in an acrid principle, and whofe qualities are antifcorbutic.

DCXXVIII.

CLASS XVI. MONADELPHIA.

This clafs confifts of fuch plants as bear herma-

phrodite flowers, furniſhed with one ſet of united ſtamina. This claſs conſiſts of nine orders.

DCXXIX.

The 1*ſt* of theſe that contain any medical article is the decandria, comprehending ſuch plants as have 10 ſtamina.

DCXXX.

Geranium.

Monogyna; capſ. 5 cocca. roſtrata.

Geranium Moſchatum.

This annual plant has an ambroſial ſmell, and derives its name from its muſky flavor.

DCXXXI.

Geranium Robertianum (Herb Robert).

This plant has a ſaltiſh and ſomewhat ſtyptic taſte, with a goatiſh ſmell. It is ſomewhat aſtringent and repellent of the milk. It is employed in hinoluria and profluvia; externally, in bubo, and ulcers of the valva and breaſts.

DCXXXII.

2. The next order is the dodecandria, or ſuch plants as have 12 ſtamina.

DCXXXIII.

Pentapetes.

Monogyna; capſ. 5-locularis, polyſperma; ſtam. 5-elongata, colorata.

Pentapetes Muhucanda.

The flowers are the part uſed, which are of a

mucilaginous quality; and their recent infusion is employed in gonorrhœa; and the dried powder as a snuff in nervous headach.

DCXXXIV.

3. The last order of this class is the polyandria, or such plants as have many stamina.

DCXXXV.

Althæa.

Polygyna; cal. exter. 9-fidus; arilli 1-spermi, verticillati.

Althæa Officinalis (Marsh Mellow).

The root and plant are both used. They are mucilaginous and insipid, and are lubricating and emollient. They are employed in cough, hoarseness, and strangury; externally, in the form of glyster or cataplasm in tenesmus, phlegmon, and pain. Their preparations are a decoction, syrup, paste, and ointment.

DCXXXVI.

Alcea.

Polygyna; cal. exter. 6-fidus, arilli 1 spermi, plures.

Alcea Rosea (Common Hollyhock).

Its quality is fatuous and mucilaginons, hence lubricating and emollient. Their infusion is used in the form of gargle in cynanche.

DCXXXVII.

Malva.

Polygyna; cal. exter. 3-phyllus, arilli 1-fpermi, verticillati, plures.

Malva Rotundifolia (*Round Leaved Mallow*).

The root and plant are both are ufed. They fatuous and mucilaginous; hence they are lubricating, demulcent, and relaxing. They are employed in phlegmon, ftrangury, and cough.

DCXXXVIII.

Hibifcus.

Mynogyna; cal. exter. 8-fidus; capf. loculis polyfpermis, coadnatis.

Hibifcus Abelmofchus (*Target-leaved Hebius*).

The feeds, the part ufed, have a peculiar mufky fmell, and are chiefly ufed as a perfume. They have been employed in tenia.

DCXXXIX.

CLASS XVII. DIADELPHIA.

This clafs confifts of fuch plants as bear hermaphrodite flowers, marked with two fets of united ftamina. The orders are four.

DCXL.

1. Hexandria, or fuch plants as have 6 ftamina.

DCXLI.

Fumaria.

Cal 2 phyllus; cor. ring. bafi gibbofa nectarifera; filam. antheris 4.

Fumaria Officinalis (*Common Fumitory*).

The recent plant and juice are ufed. They

possess a taste purely and intensely bitter, without any smell. They are stomachic and antiacid. They are exhibited in dyspepsia, cutaneous diseases, cachexy, and abdominal obesity. The dose of the juice is 2 ounces; of the extract, from 1 to 2 drams. The preparations are, an extract, conserve, syrup, and tincture.

DCXLII.

2. Octandria, or such plants as have 8 stamina.

DCXLIII.

Polygala.

Cal. 2 laciniæ alæformes, cor. vex. cylindricum.

Polygala Amara (Bitter Milkwort).

The root and leaves are used. The root is bitterish and sweet, the leaves intensely bitter. Their qualities are stomachic. The root is employed in pectoral diseases combined with weakness, in chincough, and pulmonary consumption. The dose is half a dram of the powder; the decoction of the root is in the proportion of two ounces to two lbs. of fluid reduced to one.

DCXLIV.

Polygala Senega (Rattle Snake Root).

The root and its bark are the parts used. Their taste is acid, with an acrimony and slight aroma, towards the end becoming intensely bitter and pungent. Their virtue resides in a resinous principle. They are somewhat emetic, cathartic,

ſudorific, diuretic, expectorant, ſialagogue, and deobſtruent. They are exhibited in dropſy, rheumatiſm, gout, pectoral diſeaſes from weakneſs, bites of ſerpents, conſumption, and pleuriſy. The doſe of the powder is from 10 to 30 grains; of the decoction the proportion is a ſcruple or half a dram to 1 lb. of fluid. The preparations are, the decoction, vinous infuſion, and tincture.

DCXLV.

3. Decandria, or ſuch plants as have ten ſtamina.

DCXLVI.

Pterocarpus.

Legum foliaceum, ſtamina bina tri-antheria.

Pterocarpus Draco (*Dragon's Blood*).

The concrete juice and reſin are uſed. It is red, ſtyptic, and without ſmell. Its qualities are thoſe of an aſtringent, and it is employed in profluvia, diarrhœa, and hemorrhages.

DCXLVII.

Pterocarpus Santalinus (*Red Sanders*).

The wood is the part uſed, which forms a deep red paint.

DCXLVIII.

Spartium.

Filamenta adherentia germini, ſtigma adnatum, villoſum.

Spartium Scoparium (*Common Broom*).

The plant, tops, and ſeed, are all uſed. They poſſeſs a bitter nauſeous taſte. Their qualities

are diuretic and cathartic. They are employed in dropſy. The proportion in decoction is 1 ounce of the tops to 6 ounces of water. The preparations are, an extract, infuſion, and decoction.

DCXLIX.

Geniſta.

Piſtillum deprimens carinam, ſtigma involutum.

Geniſta Canarienſis (*Canary Geniſta*).

The wood and root are the parts uſed. It has a bitteriſh reſinous taſte, with a fragrant roſy ſmell. Its qualities are ſudorific. Its preparation is a volatile oil.

DCL.

Canarienſis Tinctoria.

The plant, flowers, and ſeed, are all uſed. They give a deep yellow colour, are inſipid and inodorous. They are uſed in dropſy.

DCLI.

Ononis.

Legumen rhombeum, ſeſſile, vexillum ſtriatum.

Ononis Arvenſis et Spinoſa (*Thorny, Purple, and White Reſt Harrow*).

The root and plant are both uſed. They poſſeſs a taſte ſomewhat acrid and unpleaſant. They are diuretic, and employed in hernia humoralis, hydrocele, jaundice, and iſchuria. The doſe of the powder is a dram; and the proportion to the decoction is half an ounce to 1 lb. of fluid.

DCLII.

Dolichos.

Vexillum basi callis duobus

Dolichos Ureno (*Goose Itch Dolichos*).

The hairy down is the part used. It is anthelminthic, and exhibited against the lumbrici, in a dose of from 1 to 4 drams, in syrup or mucilage.

DCLIII.

Dolichos Pruriens (*Common Horse Eye Bean*).

This species is the same in qualities as the former.

DCLIV.

Vicia.

Stylus sub stigmate barbatus.

Vicia Faba (*Common Garden Bean*).

The flowers and seed are used. The former have a fragrant smell, the latter si farinaceous. The flowers are used as a cosmetic, and the flour of the seeds in cataplasms.

DCLV.

Glycyrrhiza.

Cal. 2-labiatus, superiore 3-fido.

Glycyrrhiza Glabra } *Common Liquorice.*
Glycyrrhiza Echinata }

The root and expressed juice are used. The former possesses a sweet, bitterish, and somewhat acrid taste. Its virtue resides in a mucilaginous saccharine principle. It is demulcent and expectorant. It is generally used in infusion with other substances. The extract is employed in catarrh, paraphonia, and strangury.

DCLVI.

Geoffræa.

Drupa nucleo ligneo.

Geoffræa Inermis (*Bastard Cabbage Tree*).

The bark of this West India tree is the part used. It is nauseously sweet, with a nauseous smell. Its qualities are drastically cathartic, emetic, and anthelminthic. The decoction is employed in lumbrici and ascarides; the proportion is an ounce to two lbs. of fluid.

DCLVII.

Geoffræa Surinamensis (*Surinam Bastard Cabbage Tree*).

Its qualities are the same as the former, but more efficacious as an anthelminthic. It is used also in decoction, the proportions being 3 drams to 8 ounces.

DCLVIII.

Indigofera.

Carina utrinque denticulo.

Indigofera Tinctoria (*Indigo*).

The feculum is the part used. It is chiefly remarkable as a dye, though it has been exhibited in diarrhæa, and the lochia in excess.

DCLXIX.

Astragalus.

Legum. 2-loculare, rotundatum.

Astragalus Excapus (*Hairy podded Milk Vetch*).

The root of this perennial plant is remarkable

for its antisiphylitic virtues. It is used in decoction in siphylis, in the proportion of 2 ounces to 3 lbs. of fluid.

DCLX.

Astragalus Tragacantha (*Gum Tragacantha*).

The concrete juice is used, which is mucilaginous, and hence lubricating and obtunding. It is exhibited in cough, hoarseness, and strangury.

DCLXI.

Trifolium.

Legum vix calyce longius, 1 s. 2-spermum, flores capitati.

Trifolium Melilotus (*Common Melilote Trifoil*).

The flowers and plant are used. They possess an acrid bitter mucilaginous taste, with a heavy fragrant smell. Their virtue resides in a volatile oil. They are emollient and resolvent. In the form of cataplasm they are applied to tumors. Their preparation is a plaster.

DCLXII.

Trifolium Repens (*White Trifoil*).

The flowers possess a sweet smell, and are used in the gout.

DCLXIII.

Trigonella.

Vexillum alæque parentes quasi tripetalæ, carina minuta.

Trigonella Fœnum Græcum (*Common Fenu-Greek*).

The seeds and flour are used. Their taste is bitterish, and their smell fragrant. They are

farinaceous, mucilaginous, emollient, and lubricating in their qualities. They are used in dysentery, diarrhœa, and ophthalmia; externally, the flour is formed into cataplasms.

DCLXIV.

CLASS XVIII. POLYADELPHIA.

This class consists of such plants as bear hermaphrodite flowers furnished with many sets of stamina. The flowers have no particular character, and the orders are four.

DCLXV.

1. The 1st order is the pentandria, or such plants as have five stamina in each set.

DCLXVI.

Theobroma.

Cal. 3-phyllus, cor. 5-petala, nectariis 5. stam. 5. antheris 3. pistil. 1.

Theobroma Cacao (Chocolate Nut).

The fruit, and concrete oil from it, are the parts used. In its quality it is oily, but with little tendency to rancidity. It is demulcent, lubricating, and nutrient. It is used in tabes, asthenia, and swelling of the anus. Its preparation, or fixed oil, is termed chocolate.

DCLXVII.

2. The 3d order of this class is the icosandria, or plants having 12 stamina; for in the 2d order, no medical articles occur.

DCLXVIII.

Citrus.

Cal. 5-dentatus, cor. 5-petala, stam. 20 in cylindrum passim connata, pistill. 1. bacca locularis pulpa vesicula.

Citrus Medica (Lemon and Lime Tree).

The fruit, juice, and yellow rind, are all used. The taste of the fruit is acid, that of the rind, bitter and aromatic. The qualities of the juice are refrigerant and antiseptic; of the rind, stimulant, and stomachic. The juice is specific in scurvy, the rind is used in dyspepsia. Its preparations are the juice, volatile oil, expressed oil, confection, and citric acid.

DCLXIX.

Citrus Aurantium (Seville and China Orange Tree).

The recent fruit, the rind, the leaves, and flowers, are all used. The rind of the leaves and flowers has an aromatic bitter taste and fragrant smell. The juice displays an acid sweet, or bitterish sweet. The virtues of this rind are nervine, stimulant, and stomachic; the juice is refrigerant. The rind is employed in dyspepsia, intermittents, and menorrhagia; the leaves in chorea, epilepsy, convulsions, and hysteria. The rind is exhibited in powder to half a dram, the leaves to a dram and a half. Its preparations are a distilled water, a volatile oil of the flowers, a tincture, candy, syrup of the rind, and a volatile pressed oil, termed oil of Bergamotte.

DCLXX.

3. The laſt order of this claſs is the polyandria, comprehending ſuch plants as have many ſtamina in each ſet; the medical articles of which are

DCLXXI.

Melaleuca.

Cal. 5-partitus, ſuperus, cor. 5-petala, capſ. ſemiveſtita calyce baccato.

Melaleuca Leucadendron (*Cajeput Oil*).

A volatile oil from the leaves is only uſed. Its ſmell is ſtrongly fragrant and aromatic. Its qualities are ſtimulant, antiſpaſmodic, carminative, emmenagogue, and deſtructive of inſects. It is uſed internally in cardialgia and pyroſis, in flatulent colic, and in ſpaſms and palſy; externally, in impotence, ſwelling of the anus, toothach, and lingual palſy. The internal doſe is from 3 to 10 drops.

DCLXXII.

Hypericum.

Cal. 5 partitus inferus, cor. 5-petala, capſ loculaſis, ſtili 1, 3. ſ, 5.

Hypericum Perforatum (*Perforated St. John's Wort*).

The flowering tops of this plant are the parts uſed. They poſſeſs a ſtrong heavy ſmell. Their qualities are reſolvent and anthelminthic. Their infuſion is exhibited in pulmonary conſumption, hemoptyſis, hematuria, and worms.

DCLXXIII.

CLASS XIX. SYNGENESIA.

This clafs confifts of fuch plants as have compound flowers; and the orders of this clafs are fix.

DCLXXIV.

1. The firft order is polygamia æqualis, or fuch plants as, with compound flowers, have the florets all hermaphrodites; the medical articles of which are:

DCLXXV.

Tragopagon.

Recept nudum, pap. plumof. ftipitat. cal. fimplex.

Tragopagon Pratenfe (Yellow Goat's Beard).

The root, the part ufed, is lactefcent and bitterifh. It is exhibited in cough and ftrangury.

DCLXXVI.

Lactuca.

Recept. nudum, pappus pilofus, ftipitatus, cal. imbricat. margine fcariofo.

Lactuca Sativa (Garden Lettuce).

The plant and feed are both of domeftic ufe, and their qualities are refrigerant.

DCLXXVII.

Lactuca Virofa (Strong fcented Lettuce).

The plant and juice are both ufed. They have an acrid bitter tafte, and a difagreeable fmell. Their virtue refides in an acrid milky juice. They are fedative and diuretic. They are employed in dropfy and jaundice. The dofe of the infpiffated juice, or extract, is from 1 to 4 drams.

DCLXXVIII.

Leontodon.

Recept. nudum, pap. plumoſ. ſtipi-
tat. cal. imbricat. ſquamis laxis.

Leontodon Taraxacum (*Common Dandelion*).

The root of this perennial plant has its virtue reſiding in a bitter ſaline lacteſcent juice. It is diuretic and deobſtruent. It is employed in jaundice and obſtinate quartans. The proportion of the decoction is 2 ounces to 3 lb.

DCLXXIX.

Hieracium.

Recept. nudum, pappus piloſus, ſeſ-
ſilis, cal. imbricat. ovatus.

Hieracium Piloſella (*Mouſe or Hawk-weed*).

This perennial plant has a bitter taſte, and is lacteſcent. Its qualities are aſtringent. It is employed in hernia, diarrhæa, itch, and herpes.

DCLXXX.

Cichorium.

Recept ſub-paleaceum, pappus ſub
5-dentatus, cal. calyculatus.

Cichorium Intybus (*Wild Succory*).

The root and plant are uſed. Their virtue is in a milky juice, intenſely bitter. They are deobſtruent, ſtomachic, and diuretic. The decoction is employed in jaundice, dyſpepſia, and abdominal ſwelling.

DCLXXXI.

Cichorium Endivia (Common Endive).

Is a domestic vegetable, and in its quality eccoprotic.

DCLXXXII.

Arctium.

Calyx squamis apice incurvato-hamosis.

Arctium Lappa (Common and Woolly-Headed Burdock).

The root and seeds are both used. The root has a sweet and somewhat austere taste, with a nauseous smell. The seeds have a taste intensely bitter, discolouring the urine. The virtues of the root are diuretic and alterative; of the seeds, cathartic. The decoction is used in cutaneous diseases, siphylis, and gout. Its proportions are an ounce or two to 1 lb. of fluid.

DCLXXXIII.

Carduus.

Calyx squamis spinosis ventricosus, recept. pilosum.

Carduus Marianus (Milk Thistle).

The plant and seeds are used. The seeds are oily, the plant bitter. It is employed in cancer.

DCLXXXIV.

Onopordon.

Calyx squamis ventricosus spinosis, recept. favosum.

Onopordon Acanthum (Cotton Thistle).

The recent plant and expressed juice are used.

They are reckoned, particularly the expreſſed juice, ſpecific in cancer as an external application.

DCLXXXV.

Cinara.

Calyx ſquamis ſquarroſus canaliculat. ſpinoſ.

Cinara Scolymus (*Artichoke*).

The leaves of this domeſtic plant are uſed in dropſy; and the doſe of the juice is from 2 to 3 ounces.

DCLXXXVI.

Carlina.

Calyx radiatus, radiis coloratis.

Carlina Acaulis (*Dwarf Carline*).

The root of this perennial plant has an acrid bitter aromatic taſte, with a ſtrong ſmell. It is ſtimulant, ſtomachic, and ſudorific. It is employed in abdominal ſwellings, cutaneous diſeaſes, and hyſteria.

DCLXXXVII.

Carthamus.

Calyx ſquamis ſquarroſus foliaceis.

Carthamus Tinctorius (*Biſflowered Saffron*).

The ſeeds and flowers are uſed. They are of a yellow colour, with a nauſeous taſte. Their qualities are cathartic and diuretic. They are employed in the cough of age, in moiſt aſthma, and in jaundice.

DCLXXXVIII.

Spilanthus.

Recept. nudum, pappus bidentatus, cal. fubæqualis.

Spilanthus Acmella (*Balm-Leaved Spilanthus*).

The plant and feed are the parts ufed. Their qualities are thofe of a bitter. They are diuretic and emmenagogue. They are employed in dropfy, ifchury, calculus, and leucorrhæa.

DCLXXXIX.

Eupatorium.

Recept. nudum, pappus plumofus, cal. imbricatus, pift. longiffima.

Eupatorium Cannabinum (*Hemp Agrimony*).

The plant and root are both ufed. Their tafte is ftrongly bitter, their fmell acrid and penetrating. The root is diuretic, cathartic, and emetic. It is exhibited in cachexy, dropfy, and hydrocele.

DCXC.

Santolina.

Recept. paleaceum, pappus nullus, cal. imbricatus, hemifphæricus.

Santolina Chamæcyparifus (*Lavender Cotton*).

The leaves and plant have a pleafing aromatic bitter tafte, with a nidorous fmell. They are tonic, carminative, and anthelminthic. They are exhibited in leucorrhæa and worms.

DCXCI.

2. The fecond order of this clafs comprehends fuch plants as have the florets of the difk herma-

phrodite, and thofe of the radius female; the medical articles of which are:

DCXCII.

Tanacetum.

Recept. nudum, papp. fubmargin. nullus, cor. radii 3-fidæ.

Tanacetum Vulgare (Common Tanfy).

The plant, flowers, and feeds, are all ufed. It poffeffes a bitter aromatic tafte, with a nidorous difagreeable fmell. Its virtue refides in a volatile oil, united with a bitter principle. It is ftimulant and carminative. The extract is purely bitter and ftomachic. The feeds are anthelminthic and fudorific. It is employed in extract as well as in a vinous and watery infufion, in the proportion of an ounce to one lb. The feeds, in powder, are given to 1 fcruple; and 2 drams, or 3, are the proportion to 1 lb. of water in infufion. The difeafes for which it is given are, dyfpepfia, intermittents, chlorofis, leucophlegmatia, dropfy, and hyfteria.

DCXCIII.

Tanacetum Balfamita (Cort-Mary).

This fpecies differs little from the former in tafte, fmell, or qualities.

DCXCIV.

Artemifia.

Recept. fubnudum. papp. nullus, cor. radii nulli.

Artemifia Abrotanum (Common Southernwood).

The plant and tops are ufed. They have an

aromatic bitterish taste, with a nidorous smell. They are stimulant, stomachic, emmenagogue, and anthelminthic. They are employed in dyspepsia, amenorrhæa, and worms; externally, in the form of bath and fomentation; internally, in decoction and infusion. The proportions of the latter are, 1 ounce to 1 lb. of fluid.

DCXCV.

Artemisia Absinthium (Common Wormwood).

The plant and tops are used, which have a strong purely bitter taste, with a nidorous smell. Their virtue resides in a volatile oil and bitter extract. They are stomachic, anthelminthic, antiseptic, and resolvent. They are employed in dyspepsia, intermittents, leucophlegmasia, amenorrhæa, jaundice, tinea, gangrene, and worms. Their preparations are a vinous and watery infusion, a tincture, extract, volatile oil, and conserve. Externally, they are used in the form of fomentation and cataplasm.

DCXCVI.

Artemisia Campestris (Field Southernwood).

This species resembles the abrotanum.

DCXCVII.

Artemisia Dracunculus; Artemisia Glacialis (Silky Wormwood); Artemisia Maritima (Sea Wormwood); Artemisia Pontica (Roman Wormwood); Artemisia Rupestris (Creeping Wormwood). All these species

differ little from the abrotanum absinthium, either in taste, smell, or qualities.

DCXCVIII.

Artemisia Santonica (Tartarian Southernwood).

The tops and branches, with the seeds, are used. Their taste is acrid and bitter, and their virtue resides in a volatile oil. They are stomachic and anthelminthic, and employed in worms and anorexia. The dose is from 10 grains to 1 dram in powder; and from 2 to 3 drams is the proportion for the infusion to 1 lb. of fluid.

DCXCIX.

Artemisia Vulgaris (Mugwort).

The plant and tops are here also used. They have a bitterish taste, and aromatic smell. They are stimulant, stomachic, and emmenagogue. They are employed in tertian fever.

DCC.

Erigeron.

Recept. nudum, papp. pilosus, cor. radii capillares.

Erigeron Acre (Blue Erigeron).

This plant has an acrid taste like mustard, and is antiscorbutic.

DCCI.

Tussilago (Coltsfoot).

Recept. nudum, papp. pilosus, cal. squamis submembranaceis.

Tussilago Farfara (Common Coltsfoot).

Every part of this plant is used, which possesses

a bitteriſh mucilaginous taſte, and is expectorant. The expreſſed juice is employed in ſcrophula, and the ſame and the decoction, in the proportion of 1 ounce to 1 lb. of fluid, is exhibited in pectoral diſeaſes and conſumption.

DCCII.

Tuſſilago Petaſites (*Great Coltsfoot*).

The root has a bitter and ſlightly acrid taſte. It is expectorant and diuretic, and employed in pectoral diſeaſes in decoction.

DCCIII.

Senecio.

Recept. nudum, papp. piloſus, cal. ſquamis apice ſphacelatis.

Senecio Vulgaris (*Common Groundſel*).

This plant has a ſaltiſh taſte. In its qualities it is anthelminthic, but chiefly uſed, externally, in the form of cataplaſm.

DCCIV.

Solidago.

Recept. nudum, papp. piloſus, cor. radii ſubſeni remoti.

Solidago Virga Aureo (*Common Golden Rod*).

The plant is uſed, which has a bitter taſte. In its qualities it is diuretic, and employed in ulceration and calculus.

DCCV.

Inula.

Recept. nudum, papp. pilofus, antheræ bafi bifetæ.

Inula Helenium (Elecampane).

The root is the part ufed. It has an aromatic mucilaginous bitter tafte, and a fragrant fmell. Its virtue refides in a volatile oil. It is ftimulant, expectorant, ftomachic, alterative, and anthelminthic. It is employed in dyfpepfia, cachexy, cough, moift afthma, abdominal fwellings, itch, and mucous piles. Its preparations are, a tincture, candy, and extract.

DCCVI.

Inula Dyfenterica (Meadow Inula).

This plant is flightly acrid to the tafte, with little fmell. It is employed in dyfentery and itch.

DCCVII.

Arnica.

Recept. nudum, papp. pilofus, ftamina radii caftrata.

Arnica Montana (German Leopard's Bone).

The flowers, plant, and root, are all ufed. The tafte is acrid, aromatic, and bitterifh, with a ftrong fmell. The qualities are, ftimulant, diuretic, emmenagogue, antifeptic, and refolvent. An infufion of the flowers is ufed in the proportion of 1 dram to 4 to 1 lb. of fluid, in afthenia, chronic rheumatifm, amaurofis, palfy, epilepfy, amenorrhæa, and paralytic ifchuria. The root, in pow-

der, in 5 or 10 grains, is uſed in diarrhæa, dyſentery, quartan fever, gangrene, and ſynochus. Externally, it is applied in malignant ulcers, and ſphacelus.

DCCVIII.

Doronicum.

Recept. nudum, papp. piloſus, pappus radii nullus.

Doronicum Latifolium (*Great Leopard's Bane*).

The root is uſed, which is ſweet and aromatic. In its qualities it reſembles the arnica montana.

DCCIX.

Matricaria.

Recept. nudum, papp. nullus, cal. ſquamis imbricatus acutis.

Matricaria Chamomilla (*Corn Feverſhew*).

The flowers of this annual plant are uſed. They are bitter, with a fragrant unpleaſing ſmell. Their virtue reſides in a volatile oil, and bitter extractive principle. They are gently ſtimulant, and antiſpaſmodic. They are employed in dyſpepſia, in frequent vomiting and cardialgia, in dyſentery, ſpaſmodic colic, intermittent fevers, hyſteria, and dyſury, in the form of bath, glyſter, infuſion, and powder. The doſe of the powder is from half a dram to a dram; the infuſion is made in the proportion of two or three ounces to one lb. of fluid. The preparations are a water, volatile oil, and ſyrup.

DCCX.

Matricaria Parthenium (*Common Feverfew*).

The plant and flowers are ufed, which have a bitter tafte, with an offenfive fmell. Their qualities are antifpafmodic, ftomachic, emmenagogue, and repellent of milk. They are exhibited in colic, hyfteria, and dyfpepfia; externally, they are employed in the form of bath, glyfter, and cataplafm.

DCCXI.

Anthemis.

Recept. paleaceum, papp. nullus, cal. hæmifphæricus.

Anthemis Catula (*Stinking Chamomile*).

The plant and flowers are ufed. They have a bitter tafte and fœtid fmell. They are antifpafmodic and ftomachic. They are employed in hyfteria and fpafmodic afthma.

DCCXII.

Anthemis Nobilis (*Common Chamomile*).

The flowers are ufed, which have a bitter tafte, with a fweetifh fmell. Their virtue refides in a volatile oil and bitter extract. They are antifpafmodic, carminative, and ftomachic. They are given in hyfteria, fpafmodic colic, flatulence, and intermittents.

DCCXIII.

Anthemis Pyrethrum (*Spanifh Chamomile*).

The root of this plant has an acrid and moft penetrating burning tafte. It is fialagogue and

errhine, and chewed in rheumatic toothach, in lingual palſy, and ſwellings of the ſalivary glands.

DCCXIV.

Achillea.

Recept. paleaceum, papp. nullus, cal. oblongus, radius ſub. 5-florus.

Achillea Ageratum (*Sweet Milfoil*).

The plant is uſed, which has a bitteriſh aromatic taſte, with a ſweet ſmelling odor. It is ſtomachic, and uſed in dyſpepſia.

DCCXV.

Achillea Atrota.

This ſpecies has a bitter taſte and aromatic ſmell. It is ſtomachic, and uſed in dyſpepſia.

DCCXVI.

Achillea Millifolium (*Yarow*).

The leaves and flowering tops are the parts uſed. They have a bitter and ſlight aromatic taſte. Their virtue reſides in a volatile oil and bitter extract. It is ſtomachic and gently ſtimulant. It is employed in dyſpepſia, flatulent cholic, hemoptyſis, piles, hyſteria, and ſpaſmodic pains in childbed.

DCCXVII.

Achillea Ptarmica (*Common Sneezwort*).

The root, plant, and flowers, are all uſed. The taſte of the root is acrid and pungent; the ſmell of the flowers, nauſeous. Their virtue reſides in a reſinous principle. They are errhine and ſialo-

gogue, and employed in place of the pyrethrum in lingual palſy and toothach.

DCCXVIII.

Sigeſbeckia.

Recept. paleaceum, papp. nullus radius dimidiatus.

Sigeſbeckia Orientalis.

This plant has a bitter taſte, and a muſky ſmell. It is exhibited in ſtrangury, calculus, gout, and leucorrhæa.

DCCXIX.

3. The third order of this claſs comprehends ſuch plants as have the florets of the diſk hermaphrodite, and thoſe of the radius neuter. The medical articles of this order are:

DCCXX.

Centaurea.

Recept ſetoſum, papp. piloſus, radius corollæ tubuloſus.

Centaurea Behen.

The root is the part uſed, which has an acrid taſte and an odorous ſmell.

DCCXXI.

Centaurea Benedicta (Bleſſed Thiſtle).

The leaves, plant, and ſeed, are all uſed. The taſte of the plant is a pure ſtrong bitter. The ſeeds are ſweet and mucilaginous. The virtues of the plant are ſtomachic, antacid, and ſlightly emetic. It is given in dyſpepſia, in intermittents, leucophlegmaſia, jaundice, and abdominal ſwell-

ings; externally, in ecchymoma. Its forms are an extract, infusion, and decoction.

DCCXXII.

Centaurea Calcitrappa (*Common Star Centaury*).

The root is the part used. It has a bitter taste, is stomachic, and employed in intermittents and dyspepsia.

DCCXXIII.

Centaurea Cynamus (*Blue Bottle*).

This species is employed by chemists as a test.

DCCXXIV.

4. The fourth order of this class comprehends such plants as have the florets of the disk male, and those of the radius female. Of this order there is only one medical article:

DCCXXV.

Calendula.

Recept. nudum, papp. nullus, sem. membranacea.

Calendula Officinalis (*Common Marigold*).

The leaves and flowers are used. They have a bitterish taste, and are in no way remarkable for their qualities, though given in eruptive diseases.

DCCXXVI.

5. The last order of this class that includes any medical articles is the monogynia, or such plants as have simple flowers.

DCCXXVII.

Lobelia.

Cal. 5-dentatus, cor. 1-petala irregularis, capf. infera, 2-locularis.

Lobelia Siphyllitica (Blue Cardinal Flower).

The root is the part ufed. It is lactefcent, acrid, and naufeous. Its virtues are emetic and drafticaliy cathartic. It is ufed in lues in the form of decoction, the proportion being half an ounce to 12 ounces of water.

DCCXXVIII.

Lobelia Longiflora.

Lobelia Tupa.

The root of thefe fpecies is only more acrid than the former, but agrees in its qualities.

DCCXXIX.

Viola.

Cal. 5-phyllus, cor. 5-petala irregularis, capf. fupera, 3-valvis.

Viola Canina (Dog's Violet).

The root of this plant is emetic and cathartic. Its dofe is from a fcruple to half a dram.

DCCXXX.

Viola Ipecacuhana (White Ipecacuanha).

This poffeffes an emetic quality, but is lefs certain in its operation than the pfycothria emetica.

DCCXXXI.

Viola Odorata (Sweet Violet).

The recent flowers, root, and feeds, are ufed.

The root and ſeeds are emetic and diuretic. The flowers are only uſed in preparing a ſyrup. The doſe of the root and ſeeds, in powder, is half a dram; in decoction, the proportion is two or three drams to one pound of fluid.

DCCXXXII.

Viola Tricolor (*Three-coloured Violet*).

The plant is uſed. It is diuretic and cathartic, and is employed in the cruſta lactea and cutaneous diſeaſes of infants. Its forms are the powder, in a doſe of 8 to 30 grains; and the decoction, in the proportion of two drams to one pound.

DCCXXXIII.

CLASS XX. GYNANDRIA.

This claſs conſiſts of ſuch plants as have the ſtamina growing either upon the ſtile itſelf, or upon a receptacle that ſtretches out into the form of a ſtile, and ſupports both the ſtamina and piſtillum. The orders of this claſs are nine, four of which only include medical articles.

DCCXXXIV.

1. Of the firſt order, Diandria, or plants having two ſtamina, the following occur:

DCCXXXV.

Orchis.

Nectarium corniculatum.

Orchis Maſcula *Orchis Militaris* *Orchis Morio*	*Male and Female Orchis,* *or Salep.*

The root is the part uſed. Its quality is muci-

laginous. It is nutrient, obtunding, and aphrodisiac. It is used in impotence, dysentery, consumption, and internal ulcers. Its proportions are two drams to one pound of fluid.

DCCXXXVI.

Epidendrum.

Nectarium turbinatum.

Epidendrum Vanilla (*Vanilla*).

The pod of this parasitical shrub is the part used. Its taste is grateful and aromatic, with a musky smell. Its virtues are stimulant, calefacient, nervine, and aphrodisiac. It is an ingredient in the preparation of chocolate.

DCCXXXVII.

2. Of the order of Hexandria, or such plants as have six stamina, there is:

DCCXXXVIII.

Aristolochia.

6-gyna, cal. nullus, cor. 1-petala, caps. 6-locularis.

Aristolochia Clematitis (*Upright Birthwort*).

The root is the part used. It has an acrid bitter taste, and a strong smell. It is stimulant, stomachic, emmenagogue, and resolvent. It is employed in amenorrhæa, chlorosis, cachexy, fistula, and cancer.

DCCXXXIX.

Aristolochia Longa et Rotunda (*Long and Round Birthwort*).

These species are the same as the former.

DCCXL.

Ariſtolochia Serpentaria (Virginian Snakeroot).

The root is the part uſed. Its taſte is aromatic, bitteriſh, and pungent, with a ſmell like valerian. It is ſtimulant and cordial. It is employed in typhus, intermittents, ſphachelus, chloroſis, amenorrhæa, and venomous bites. Its forms are the powder, from 10 to 30 grains; the infuſion, in the proportion of half a dram to 3 ounces for 1 lb. of fluid.

DCCXLI.

Ariſtolochia Trilobata (Three-lobed Snakeroot).

This ſpecies is the ſame as the former.

DCCXLII.

3. Of the order of Dodecandria, or plants that have 12 ſtamina, the only article is:

DCCXLIII.

Cytinus.

1-gynus, cal. 4-fidus, cor. 0, bacca 8-locularis.

Cytinus Hypocyſtis.

The inſpiſſated juice of the berries is uſed. It has an acid auſtere ſtyptic taſte, and is ſoluble in alcohol. Its qualities are aſtringent, and it is uſed in profluvia.

DCCXLIV.

4. The only articles of the next order, Polyandria, or ſuch plants as have many ſtamina, are:

DCCXLV.

Arum.

Spatha, cal. nullus, cor. nulla, ftam. fupra piftilla.

Arum Maculatum (*Waterobin*).

The recent root is the part ufed. It poffeffes a burning tafte. Its virtue refides in an acrid volatile principle; but, when dried, it becomes farinaceous, and has little or no acrimony. Its qualities are ftimulant, fudorific, expectorant, and cofmetic. When frefh, it is corrofive and veficatory. It is employed in dyfpepfia, headach, intermittents, moift afthma, cachexy, and chronic rheumatifm.

DCCXLVI.

Zoftera.

Folium, cal. nullus, cor. nulla, fem. alterna, nuda.

Zoftera Marina.

The fibres of the root are the part ufed, which are burnt to afhes, and exhibited in fcrofula and bronchocele.

DCCXLVII.

CLASS XXI. MONOECIA.

This clafs confifts of fuch plants as have no hermaphrodite flowers, but bear both male and female flowers in the fame plant. The orders of this clafs are eleven.

DCCXLVIII.

1. The firft is Monandria, or fuch as have their male flowers furnifhed with one ftamen.

DCCXLIX.

Cynomorium.

Maſ. cal. ament. cor. nulla. Foem. cal. ament. cor. 0. ſtil. 1. ſem. 1, ſubrot.

Cynomorium Coccinium.

This paraſitical plant has a bitteriſh ſtyptic taſte, with a black colour. In its quality it is aſtringent, and employed in hemorrhages, dyſentery in its laſt ſtage, and ulcers. Its form is the powder in a doſe of 20 grains to a dram, and alſo in decoction. Externally, it forms an application to phagedenic ulcers.

DCCL.

2. The next order, in which any medical articles occur, is the Triandria, or ſuch plants as have their male-flowers furniſhed with three ſtamina.

DCCLI.

Carex.

Maſ. ament. 1-florum, cor. nulla. Fœm. ament. 1-florum, cor. 1. ſtil. 1. ſem. 1, tunicatum.

Carex Arenaria (Sea Carex).

The root is the part uſed, which poſſeſſes a ſweetiſh teribinthinate ſmell. Its qualities are ſudorific and diuretic. It is employed in cutaneous diſeaſes and ſiphylis.

DCCLII.

Phyllanthus.

Maſ. cal. 6-partitus, cor nulla. Fœm. cal. 6-partitus, cor. o. ſtil. 3. capſ. 3-cocca.

Phyllanthus Emblica (Shrubby Phyllanthus).

The dried fruit and nut are the parts uſed. The taſte is acid and auſtere, and ſomewhat acrid. Its qualities are aſtringent. It is employed in ſcurvy and dyſentery.

DCCLIII.

3. Of the order of Tetrandria, or ſuch plants as have their male flowers furniſhed with four ſtamina, the articles are:

DCCLIV.

Betula.

Maſ. ament. 3-florum, cor. 4 partita. Fœm. ament. 2-florum, cor. o. ſtil. 2. ſem. 1-ovatum.

Betula Alba (Common Birch Tree).

The leaves, outer bark, and juice, are uſed. The leaves are employed in eriſipelas; the juice, in cutaneous diſeaſes, ſcurvy, and worms. Its preparation is the black oil of the bark.

DCCLV.

Buxus.

Maſ. cal. 3-phyllus, cor. 2-petala, Fœm. cal. 4-phyllus, cor. 3 pet. ſtigm. 3. capſ. 3-locularis.

Buxus Sempervirens (Common Box Tree).

The wood and leaves are uſed. Their taſte is

bitter, with a rank fœtid ſmell. The wood is ſudorific and alterative; the leaves cathartic. The decoction is uſed in epilepſy and ſiphylis; the oil in baldneſs.

DCCLVI.

Urtica.

Maſ. cal. 4-phyllus, cor. nulla, nect. cyathiforme. Fœm. cal. 2-valvis, cor. 0. ſtig. villoſ. ſem. 1. ovatum.

Urtica Dioica (*Common Nettle*).

The root, plant, and juice, are all uſed. The juice is alterative in doſes of one or two ounces, and employed in hemoptyſis, piles, phthiſis, and jaundice. The ſtinging with nettles, or its external uſe, takes place in palſy and chronic weakneſs.

DCCLVII.

Urtica Pilulifera (*Roman Nettle*).

The ſeeds are chiefly uſed, which are oily, and have a diuretic quality. They are employed in meaſles, nephritis, and hemorrhage.

DCCLVIII.

Urtica Urens (*Leſſer Nettle*).

The ſeeds are uſed in decoction from their anthelminthic quality.

DCCLIX.

Morus.

Mas. cal. 4-partitus, cor. nulla. Fœm. cal 4-phyllus, cor 0. stil 2. sem. 1. baccatum.

Morus Nigra (Common Mulberry Tree).

The fruit, leaves, and bark, are all used. The fruit is sweet and slightly acid, the leaves are styptic. The fruit is used in fevers, as refrigerant. The bark is employed in tenia.

DCCLX.

4. Of the order of Pentandria, or such plants as have their male flowers furnished with five stamina, there is only,

DCCLXI.

Xanthium.

Mas. cal. comm. polyph cor. 5-fida, filam. connexa. Fœm. cal. nullus, cor. 0. stil. 2 drupa 2 locul.

Xanthium Strumarium (Lesser Burdock).

The recent leaves and seeds are used. Their taste is bitter and slightly acrid. They are employed in scrofula, bronchocele, herpes, and erisipelas. The dose of the seeds is half an ounce.

DCCLXII.

5. Of the next order, Polyandria, or such plants whose male flowers have more than seven stamina, the articles are:

DCCLXIII.

Poterium.

Maſ. cal 4-phyllus, cor. 4-partita, ſtam. 32 circiter. Fœm. cal. 4-phyllus, cor. 4-petala, piſt. 2, ſem. 2-obducta.

Poterium Sanguiſorbum (*Common Burnet*).

The plant is uſed, having a ſtyptic taſte, and ſmell ſlightly fragrant. Its virtues are aſtringent.

DCCLXIV.

Quercus.

Maſ. cal. 5-fidus, cor. nulla, ſtam. 10 circiter. Fœm. cal. integer, cor. 0, ſtil. 5 nux coriacea.

Quercus Robur (*Common Oak Tree*).

The fruit, bark, leaves, and cup of the fruit, are all uſed. The taſte is ſtyptic. The virtues are tonic, aſtringent, and obſtipating. Internally, it is uſed in decoction and powder, conjoined with bitters, in intermittents and paſſive diſcharges. Externally, it is employed in the form of fomentation, injection, and gargle, in prolapſus of the vagina and rectum, in relaxation of uvula, in piles, leucorrhæa, and gonorrhæa. The proportion, in decoction, is one ounce to the lb. of fluid; and in powder, the doſe is to the extent of half a dram. Its preparation is an ointment for piles, in the proportion of 1 ſcruple to 3 ounces of axunge.

DCCLXV.

Quercus Cerris (*Turkey Oak Tree*).

The galls are the part uſed, or excreſcences

from it. They are ſtyptic, and of courſe tonic and aſtringent. They are uſed in the form of powder, decoction, and ointment, in ſwelling of the anus, prolapſus, and gonorrhæa.

DCCLXVI.

Quercus Suber (*Cork Tree*).

The bark is the part uſed. It is aſtringent, and, when burnt and mixed with oil, it is an application in piles.

DCCLXVII.

Juglans.

Maſ. ament. imbricat. cor. 6-partita, ſtam. 18 circiter. Fœm. cal. 4-fidus, cor. 4-petala, ſtil. 2. drupa coriacea.

Juglans Regia (*Walnut Tree*).

The rind of the green fruit, and the fruit and ſhell, are all uſed. The rind has a bitter ſtyptic taſte, with a ſtrong ſmell. It is tonic, aſtringent, and anthelminthic. The decoction is in the proportion of 1 lb. to 20 of fluid, and that boiled to 10. It is employed in obſtinate lues, leproſy, and worms. An extract is alſo prepared.

DCCLXVIII.

Corylus.

Maſ. ament. imbricat. cor nulla, ſtam. 2. Fœm. cal. 2-phyllus, cor. o. ſtil. 2. nux nuda.

Corylus Arillana (*Hazle Nut*).

The fixed oil from it turns rancefcent with diffi-

culty, and may be therefore impregnated with perfumes.

DCCLXIX.

Liquidambar.

Maſ. cal. 4-phyllus, cor. nulla, ſtam. plurima. Fœm. cal. 4-phyllus, cor. o. ſtil. 2. capſ. polyſperma.

Liquidambar Styraciflua (*Sweet Gum*).

This balſam poſſeſſes an acrid aromatic taſte, with a fragrant ſmell. It is ſtimulant and calefacient, and uſed externally in palſy and itch.

DCCLXX.

6. Of the next order of this claſs, the Monodelphia, or ſuch plants as have their male flowers furniſhed with one ſet of united ſtamina, the medical articles are:

DCCLXXI.

Pinus.

Maſ. cal. 4-phyllus, cor. nulla, ſtam. plurima. Fœm. ament. ſtrobilac. cor. 2. piſt. 2. nuces 2, alatæ.

Pinus Abies (*Norway Spruce*).

The tops, and concrete gum or reſin, are uſed. The tops are aceſcent and reſinous. The reſin has an agreeable bitteriſh taſte, and fragrant ſmell. They are ſtimulant, diuretic, and diaphoretic. The decoction of the tops is employed in cutaneous diſeaſes. The reſin, melted with axunge, is uſed externally in leproſy. The melted reſin, when

ſtrained, forms burgundy pitch; and, when boiled with vinegar, colophonium.

DCCLXXII.

Pinus Balſamica.

Pinus Canadenſis (Canada Balſam).

This liquid reſin has a taſte ſlightly aromatic, ſtimulant, pungent, and bitteriſh, with a fragrant pleaſing ſmell. It is ſtimulant, diuretic, and diaphoretic. It is exhibited in gonorrhœa, cutaneous diſeaſes, particularly herpes, and cold affections of the viſcera. The doſe is from 40 to 60 drops.

DCCLXXIII.

Pinus Cimbra (Sibirian Stone Pine Tree).

The liquid reſin is here alſo uſed. It is diuretic and ſtimulant, and employed in gonorrhœa and ulcers.

DCCLXXIV.

Pinus Larix (White Larch Tree).

The reſin is here diuretic, ſtimulant, and gives the urine a violet ſmell. It is applied to the ſame maladies as the former ſpecies.

DCCLXXV.

Pinus Munchos.

A diſtilled oil is the preparation from this ſpecies.

DCCLXXVI.

Pinus Pinea (Stone Pine Tree).

The nuts are here uſed, which are ſweet and

oily. Their qualities are nutritive. They are given in consumption and strangury.

DCCLXXVII.

Pinus Picea (Silver Fir Tree).

This species produces white resin.

DCCLXXVIII.

Pinus Sylvestris (Scot's Fir Tree).

The tops and liquid resin are used. Their qualities are resinous, acrid, and bitter. They are stimulant, diuretic, diaphoretic, and depilatory. Internally, they are exhibited in chronic rheumatism, gonorrhœa, moist asthma, scurvy, cutaneous diseases, and herpes. Externally, they are employed, in glyster, in costiveness, and, in ointment or plaster, in atonic ulcers. Internally, from 5 to 10 grains of the resin is given, beat up with sugar or yolk of an egg. The decoction of the tops is in the proportion of half an ounce to 2 lbs. of fluid; in glyster, half an ounce of the resin is beat up with the yolk of an egg. The preparations from the tree are white resin, or colophonium, black resin, or tar, volatile oil of turpentine, and tar water.

DCCLXXIX.

Thuya.

Mas. amentum, cor. nulla, anther 4. Fœm. ament. strobilac. cor. o pist. 2. nux cincta ala.

Thuya Occidentalis (American Arbor Vitæ Tree).

The leaves and wood are used. Their qualities

are refinous, and hence expectorant and fudorific. The decoction is given in dropfy, rheumatifm, cough, and intermittents.

DCCLXXX.

Croton.

Maf. cal. 5-phyllus, cor. 5 petala. ftam. 15. Fœm. cal. 5-phyllus, cor. 0. ftil. 3. capf. 3-cocca.

Croton Cafcarilla (*Cafcarilla*).

The bark is the part ufed, which has a bitter and flightly acrid tafte, with a fragrant fmell like mufk. Its virtue refides in a volatile oil, and bitter extract. It is tonic and ftimulant, and employed in dyfpepfia, diarrhæa, intermittent and bilious fevers. The dofe of the powder is from 10 to 30 grains; and the proportion of the infufion is a dram to the lb. The dofe of the extract is a dram.

DCCLXXXI.

Croton Lactiferum (*Gum Lac*).

This is a refinous fubftance, formed by infects upon the tree. It is red coloured and ftyptic; it is therefore aftringent, and it is ufed in laxity of the gums in the form of tincture.

DCCLXXXII.

Jatropha.

Maſ. cal. nullus, cor. 5-fida, ſtam. 10. Fœm. cal nullus, cor. 5-petala, ſtil 3. capſ. 3-cocca.

Jatropha Elaſtica (*Calachouc*).

This elaſtic reſin is uſed for making catheters, bougies, and peſſaries, &c.

DCCLXXXIII.

Jatropha Manihot (*Caſſava*).

The root is the part uſed, which, when dried and freed of the poiſonous juice, is eatable and nutritive. The juice is poiſonous, acrid, and burning.

DCCLXXXIV.

Ricinus.

Maſ. cal. 5-partitus, cor. nulla, ſtam. multa. Fœm. cal. 3-partitus, cor 0 ſtil. 3 capſ 3-cocca.

Ricinus Communis (*Common Palma Chriſti*).

The expreſſed oil of the ſeeds is uſed, which is gently laxative, cathartic, and anthelminthic. It is employed in coſtiveneſs, dyſentery, ileas, nephritis, Devonſhire colic, and worms. The doſe is from 1 to 2 ounces in a proper vehicle.

DCCLXXXV.

7. Of the next order of this claſs, Syngeneſia, or ſuch plants as have their male flowers furniſhed with ſtamina of which the antheræ are united, the medical articles are:

DCCLXXXVI.

Momordica.

Maf. cal. 5-fidus, cor. 5-fida, filam. 3. Fœm. cal. 5-fidus, cor. 5-fida, ftil. 3-fidus, pom. elafticum

Momordica Elaterium (Squirting Cucumber).

The root, recent fruit, and refinous extract, are all ufed. The tafte is intenfely bitter, acrid, and naufeous. The qualities are emetic, drafticathartic, emmenagogue, and diuretic. It is employed in dropfy, coftivenefs, amenorrhæa, and fcrofula. The dofe of the root is 15 to 30 grains; and of the extract, from 1 to 4 grains.

DCCLXXXVII.

Cucumis.

Maf. cal. 5-dentatus, cor. 5-fida, filam 3. Fœm. cal. 5-dentatus, cor. 5-fida, ftil. 3-fida, pomum, fem. argutis.

Cucumis Colocynthis (Colocynth or Bitter Cucumber).

The fruit and pulp are ufed. They have a very bitter naufeous tafte and fmell. Their virtues are diuretic, deobftruent, drafticaIly cathartic, emmenagogue, and anthelminthic. They are employed in dropfy, coftivenefs, and epilepfy. The dofe is $\frac{1}{8}$ of a grain, 30 grains of the pulp boiled in half a pound of fluid, forms a glyfter. The antidote of this medicine is camphor.

DCCLXXXVIII.

Colocynthis Melo (Melon).

The feeds are oily and fucculent. Their qualities are refrigerating. In the form of emulfion they are given in fevers and ftrangury.

DCCLXXXIX.

Colocynthis Sativus (Common Cucumber).

This fpecies refembles the former.

DCCXC.

Cucurbita.

Maf. cal. 5-dentatus, cor. 5-fida, filam. 3. Fœm. cal. 5-dentatus, cor. 5-fida, ftil. 3-fida, pomum, fem marginatis.

Cucurbita Lagenaria
Cucurbita Pipa
Cucurbita Citrullus } *Water Melon, or Gourd.*

Its qualities refembles thofe of the former articles.

DCCXCI.

Brionia.

Maf. cal. 5-dentatus, cor. 5-partita, filam. 3 Fœm. cal. 5-dentatus, cor. 5-petala, bacca.

Brionia Alba (White Briony).

The recent root and infpiffated juice, are the parts ufed. Their tafte is acrid and intenfely bitter. Their fmell is naufeous. Their virtue refides in an acrid volatile principle. They are drafticaliy cathartic, diuretic, anthelminthic, and emmenagogue; externally, rubefacient and refol-

vent. They are given in dropfy, afthma, mania, epilepfy, and chronic rheumatifm. The dofe of the powder is half a fcruple; of the extract, 2 drams to half an ounce. It is alfo ufed in decoction, Externally, it is applied in cataplafm, in œdema, lupia, and ecchymoma.

DCCXCII.

CLASS XXII. DIOECIA.

This clafs confifts of fuch plants as have no hermaphrodite flowers, but bear male and female flowers in diftinct plants. It comprehends 13 orders.

DCCXCIII.

1. The firft of the orders in which any medical article occurs, is the Diandria, or fuch plants as have their male flowers furnifhed with two ftamina.

DCCXCIV.

Salix.

Maf. ament. fquama, cor. nulla, ftam. 2, raro 5. Fœm. ament. fquama, cor. o. ftig. 2. capf. 2-valvis, fem. pap.

Salix Alba (*White Willow*).
Salix Caprea (*Black Willow*).
Salix Fragilis (*Crock Willow*).
Salix Pentàndra (*Sweet Willow*).
Salix Vitulina (*Yellow Willow*).

The rind of the branches is the part ufed. The tafte is bitter and ftyptic. Its qualities are tonic,

aſtringent, and ſtomachic. It is employed as a ſubſtitute for the bark in intermittents, and other diſeaſes in which the bark is uſed. The doſe of the powder is from 20 grains to one ſcruple; and the proportion of the decoction is half an ounce to one lb. of fluid.

DCCXCV.

2. The next order, Tetrandria, comprehends ſuch plants as have their male flowers furniſhed with 4 ſtamina.

DCCXCVI.

Viſcum.

Maſ. cal. 4-partitus, cor. nulla. Fœm. cal. 4-phyllus, cor. o, ſtigm. obtuſ. bacca 1 ſperma, infera.

Viſcum Album (White Miſletoe).

The woody branches and leaves are the parts uſed. When recent, they have a nauſeous ſmell. When dried, they are mucilaginous. They are lubricating and obtunding. They are employed in epilepſy, chorea, convulſion, and dyſentery. The doſe of the powder is half a dram.

DCCXCVII.

Myrica.

Maſ. ament. ſquama, cor nulla. Fœm. ament. ſquama, cor. o. ſtil. 2. bacca 1-ſperma.

Myrica Gale (Sweet Gale Willow).

The leaves are the part uſed. They give a yellow colour, have a bitter taſte, and inodorous

ſmell. They are narcotic, and uſed againſt itch and vermin.

DCCXCVIII.

3. The next order of this claſs is Pentandria, or ſuch plants as have their male flowers furniſhed with five ſtamina.

DCCXCIX.

Piſtachia.

Maſ. cal. 5-fidus, cor. nulla. Fem. cal. 3-fidus, cor. o. ſtil. 3. drupa ſicca.

Piſtachia Vera (*Piſtachio Nut*).

The nuts, the part uſed, are oily, and in their qualities nutritive.

DCCC.

Piſtachia Terebenthinus (*Common Turpentine Tree*).

The liquid reſin is the part uſed, which has a grateful bitter, and ſlightly acrid taſte, giving the urine a violet ſmell. In its qualities it is ſtimulant, diuretic, eccoprotic, and reſolvent. It is employed in cough, conſumption, ulcers, and gonorrhœa.

DCCCI.

Piſtachia Lertiſcus (*Common Maſtic Tree*).

The concrete reſin is uſed, which is in quality reſinous and aromatic. It is uſed as a maſticatory, and for fumigation.

DCCCII.

Cannabis.

Maſ. cal. 5-partitus, cor. nulla.
Fœm cal. 1-phyllus, cor. 0 ſtil. 2. nux.

Cannabis Sativa (*Common Hemp*).

The ſeed is uſed, which has a rank ſmell. Its virtue reſides in an oily and mucilaginous principle. It is obtunding and ſedative, and employed in gonorrhœa, ſtrangury, and catarrhal cough, in the form of infuſion or emulſion, the proportions being half an ounce to 4 lb.

DCCCIII.

Humulus.

Maſ. cal. 5-phyllus, cor. nulla.
Fœm. cal. 1-phyllus, cor. 0. ſtil. 2. ſem. calyce alatum.

Humulus Lupulus (*Hops*).

The ſtroboli are the parts uſed. Their taſte is bitter, with a grateful aromatic nidorous ſmell. They are narcotic and ſtomachic, and employed in luxations and baldneſs.

DCCCIV.

4. Of the order of Hexandria, or ſuch plants as have their male flowers furniſhed with 6 ſtamina, the following medical articles occur:

DCCCV.

Smilax.

Maſ. cal. 6-phyllus, cor. nulla. Fœm. cal. 6 phyllus, cor. o. ſtil. 3 bacca ſupera, 3-loc.

Smilax Sarſaparilla (Sarſaparilla).

The root is the part uſed. Its taſte is mucilaginous and bitteriſh. Its qualities are diuretic, diaphoretic, and alterative. They are employed in lues, cachexy, and gout. The doſe of the powder is from 1 ſcruple to 2; and the decoction is in the proportion of 3 drams to 2 lbs.

DCCCVI.

Smilax China (China).

The root is uſed, which is mucilaginous to the taſte, and without ſmell. It is employed in lues and gout. The proportion of the decoction is one ounce to a ℔.

DCCCVII.

5. Of the order, Octandria, or ſuch plants as have their male flowers furniſhed with 8 ſtamina, the articles are:

DCCCVIII.

Populus.

Maſ. ament. lacerum, cor. nulla, nect. ovat. ſtam 8-16. Fœm. ament. lacerum, cor. o. ſtigm. 4-fid. capſ. 2-valvis, ſem. peppoſa.

Populus Nigra (Black Poplar Tree).

The gems are the part uſed. They are obtund-

ing, emollient, and ſoporific. They are employed in diarrhœa and burns.

DCCCIX.

Populus Balſamifera (*Tamahac Poplar Tree*).

The gum is the part uſed, which has a muſky ſmell, and is uſed in vomiting and hyſteria.

DCCCX.

Rhodiola.

Maſ. cal. 4-partitus, cor. 4-p[illegible]la. Fœm. cal. 4-partitus, cor. o. piſt. 4. capſ. 4 polyſpermæ.

Rhodiola Roſea (*Share-root*).

The root has a fragrant roſy ſmell. It is red, and ſtyptic, and employed in leucorrhœa and headach.

DCCCXI.

6. Of the order of Enneandria, or ſuch plants whoſe male flowers are furniſhed with 9 ſtamina, the only article is:

DCCCXII.

Mercurialis.

Maſ. cal. 3-phyllus, cor. nulla, ſtam. 9-12. Fœm. cal. 3-phyllus, cor. o. ſtil. 2. capſ. 2-cocca.

Mercurialis Annua (*Mercurialis*).

This plant is cathartic, hipnotic, repellent, and coſmetic. It is uſed in ſiphylis, and in decoction for glyſters.

DCCCXIII.

7. Of the order of Dodecandria, or plants

whose male flowers are furnished with 12 stamina, the only article that occurs is:

DCCCXIV.

Menispermum.

Mas. cal. 2 phyllus, cor. 12-petala. Fœm cal. 6-phyllus, cor. 6-petala, bacca 3-cocca.

Menispermum Cocculus (*Indian Berries*).

The fruit or nut is the part used. It has a taste highly bitter and pungent. It is narcotic, and used against vermine.

DCCCXV.

8. Of the next order, Monodelphia, or plants whose male flowers are furnished with one set of united stamina, the articles are:

DCCCXVI.

Juniperus.

Mas ament. cor. nulla, stam. 3. Fœm. cal. 3-partitus, cor. 3-petala, stil 3. bacca intera, 3-sperma, calycina.

Juniperus Sabina (*Common Savin*).

The leaves are the part used. They have an acrid bitterish taste, with a goatish or rank smell. Their virtue resides in a copious volatile oil. They are stimulant, corrosive, emmenagogue, antispasmodic, diuretic, depilatory, and anthelminthic. They are used internally in chronic amenorrhœa in the form of powder, infusion, and decoction:

externally, in cataplafms, caries, tinea, pfora, fungous ulcers, warts, candylomata, and toothach. The dofe of the powder is from 5 to 15 grains. The preparations are the diftilled water, oil, and extract.

DCCCXVII.

Juniperus Communis (*Common Juniper*).

The berries, wood, and refin, are all ufed. The tafte of the berries is aromatic and fweet, with a fragrant fmell. Their virtues depend on a copious volatile oil and refinous principle. The qualities of the wood are the fame, but in a lefs degree; and the refin poffeffes a ftrong refinous tafte. Thefe parts are all ftimulant, diuretic, alterative, and carminative. The decoction and extract, though lefs ftimulant, are more diuretic. All the forms are employed in dropfy, afthma, catarrh, and cutaneous difeafes. The oil is ufed againft worms. The dofe of the powder is 1 fcruple; and the proportion of the infufion is from 1 to 4 drams to 1 lb. of fluid. The various preparations are, a decoction, infufion, extract, rob, diftilled water, volatile oil, and fpirit.

DCCCVIII.

Juniperus Lycia (*Olibanum*).

This gum refin is yellow and pellucid, with a bitterifh tafte and fragrant fmell. It is employed in leucorrhœa, and for fumigations.

DCCCXIX.

Ciſſampelos.

Maſ. cal. nullus, cor. 4-petala, ſtam. 4. Fœm cal. nullus, cor. nulla, ſtigm. 3. bacca 1-ſperma.

Ciſſampelos Pareira (Pareira Brava).

The root of this South-American tree is the part uſed. Its taſte is a bitter ſweet. Its virtues are diuretic and alterative. It is employed in dyſury, urinary calculus, jaundice, gout, and pituitous diſeaſes. Its form is the infuſion, in the proportion of half an ounce to 2 lb., reduced by boiling to 1.

DCCCXX.

9. Of the next order, Syngeneſia, or plants whoſe male flowers are furniſhed with ſtamina of which the antheræ are united, there is only one medical article.

DCCCXXI.

Ruſcus.

Maſ. cal. 6-phyllus, cor. nulla, ſtam. 5. Fœm. cal. 6-phyllus, cor nulla, piſt. 1. bacca 3-loc. 2-ſperma.

Ruſcus Aculeatus (Prickly Butcher's Broom).

The root of this ſhrub is the part uſed. Its taſte is a bitter ſweet, like dulcamara. It is tonic, ſtimulant, and reſolvent. It is given in abdominal ſwellings, cutaneous diſeaſes, jaundice, and dropſy.

DCCCXXII.

Ruſcus Hypogloſſum (Double Leaved Butcher's Broom).

The plant is uſed, the quality of which is

aſtringent; and it is employed in laxity of the uvula.

DCCCXXIII.

CLASS XXIII. POLYGAMIA.

This claſs conſiſts of ſuch plants as bear hermaphrodite flowers, and alſo either male or female flowers, or both. The orders of this claſs are three.

DCCCXXIV.

1. The firſt, or Monecia, comprehends ſuch plants as have the polygamy on the ſame plant, and the medical articles of this kind are:

DCCCXXV.

Veratrum.

Her. cal. nullus, cor. 6-petala, ſtam. 6. piſt. 3 capſ 3 Maſ. cal. nullus, cor. 6-petala, ſtam. 6.

Veratrum Album (*White Hellebore*).

The root is the part uſed, the taſte of which is acrid, ſaline, and bitteriſh, with a nauſeous ſmell. It is draſtically cathartic, emetic, emmenagogue, errhine, and vermifuge. Internally, it is uſed in dropſy, epilepſy, obſtinate cutaneous diſeaſes, mania, melancholy, dyſpepſia, and quartan ague. Its form is that of powder, from 3 to 40 grains; in infuſion, from 1 ſcruple to 3 drams to 1 lb. of fluid; in extract, the doſe is from 2 grains to 1 dram, and the infuſion in vinegar is 1 dram to 20. The antidote of this root is coffee.

DCCCXXVI.

Veratrum Nigrum (Black Hellebore).

The root is alfo ufed, and its qualities are the fame as the former.

DCCCXXVII.

Veratrum Sabadilla.

The feeds and capfules are ufed. Their tafte is bitter, acrid, and pungent. Their virtues are, drafltically cathartic, diuretic, emetic, anthelminthic, and good againft vermin. They are employed in dofes of 2 grains, and fo on progreffively, according to the age of the child.

DCCCXXVIII.

Andropogon.

Her. glum. 1-flor. glum. bafi arift. ftam. 3. ftil. 2. fem. 1. Maf. glum. 1-flor. glum. bafi arift. ftam. 3.

Andropogon Nardus (Spikenard).

The fibres of the root are the parts ufed, which have an acrid bitterifh tafte, and fragrant fmell. Their virtues are cordial and ftomachic. They are employed in afthenia and dyfpepfia.

DCCCXXIX.

Parietaria.

Her cal. 4-fidus, cor. nulla, ftam. 4. ftil. 1. fem 1. Fœm. cal. 4-fidus, cor. nulla. ftil. 1. fem. 1.

Parietaria Officinalis (Wall Pellitory).

The plant and root are both ufed. Its quality

is watery and infipid. It is reckoned cooling and diuretic, and employed in ftrangury and confumption.

DCCCXXX.

Mimofa.

Her. cal 5-dent. cor. 5-fid. ftam. 4-100. pift. 1. legum. Maf. cal. 5-dent. cor. 5-fid. ftam. 5-100.

Mimofa Catechu (*Japan Earth*).

The refinous gum is the part ufed. It poffeffes a bitterifh, and afterwards fweetifh ftyptic tafte. Its virtue refides in a refinous aftringent extract. Its virtues are tonic and aftringent. It is employed in diarrhæa, atonic dyfentery, and paffive difcharge of piles. Externally, in relaxed ulcers, efpecially of the gums and uvula, and in acrid catarrhal defluxions. Its forms are the powder; the dofe is from 10 grains to 1 fcruple; and in tincture.

DCCCXXXI.

Mimofa Nilotica (*Gum Arabic*).

Mimofa Senegal (*Gum Senegal*).

Thefe gums, in their qualities, are mucilaginous, fweet, and nutrient. They are ufed internally in dyfury, dyfentery, hoarfenefs, ophthalmia, and where acrimony and irritation prevail. Their form is the watery folution or mucilage.

DCCCXXXII.

2. Of the order of Diœcia, or fuch as have the polygamy on two diftinct plants, the articles are:

DCCCXXXIII.

Fraxinus.

Her. cal. o-ſ 4-part. cor. o-ſ. 4 pet. ſtam. 2 piſt. 1. ſem. 1. Fœm. cal. o-ſ. 4-part. cor o-ſ. 4-pet. piſt. 1. ſem 1.

Fraxinus Excelſior (Common Aſh).

The bark of the branches, the ſeed, and leaves, are all uſed. The bark is bitteriſh, the ſeed aromatic. The qualities of the bark are antiſeptic; of the ſeed, diuretic. The bark is uſed in place of the cinchona in intermittents; the ſeed in gravel and obeſity; the leaves in venomous bites.

DCCCXXXIV.

Fraxinus Rotundifolia, et aliæ Species, (Manna).

The ſaccharine juice, or manna, is the product from theſe ſpecies. In taſte, it is nauſeouſly ſweet, its virtue reſiding in a ſaccharine mucilaginous principle. Its quality is eccoprotic, and employed againſt coſtiveneſs in children, from 1 ſcruple to 3; and in adults to 1 ounce.

DCCCXXXV.

Panax.

Her. umb. cal. 5-dent. cor. 5-petala, ſtam. 5. ſtil. 2. bacca 2-ſperm. Maſ. umbel. cal. integ. cor. 5-petala, ſtam 5.

Panax Quinquefolium (Ginſeng).

The root is the part uſed. Its taſte is grateful, and ſlightly aromatic. Its virtues are gently ſti-

mulant and aphrodisiac. It is given from 1 scruple to a dram in impotence, asthenia, and atrophy.

DCCCXXXVI.

3. Of the last order of this class, Trioecia, or such as have their polygamy on three distinct plants, the articles are:

DCCCXXXVII.

Ceratonia.

Her. cal. 5-partitus, cor. nulla, stam. 5. stil. 1. legum. coriac. polysperm. Mas. cal. 5-partitus. cor. nulla, stam. 5. Foem. cal. sub. 5-dent. cor. nulla, stil. 1. legum. coriac. polysperm.

Ceratonia Siliqua (St. John's Bread).

The fruit is the part used. It is sweet and mucilaginous. Its virtues are stimulant and expectorant. It is employed, in decoction, in hoarseness, acrid cough, and catarrh.

DCCCXXXVIII.

Ficus.

Recept. commune turbinatum, conniventi-clausum, carnosum. Foem. cal. 5-partitus, cor. nulla, pist. 1. sem. 1. Mas. cal. 3-partitus, cor. nulla, stam. 3. Mas et Foem. intra idem receptaculum commune, distinctis fructificationibus partialibus.

Ficus Carica (Common Fig Tree).

The fruit is the part used. It is sweet and mucilaginous. Its virtues are nutrient, emollient,

maturating, obtunding, expectorant, and eccoprotic. The decoction is given internally in hoarſeneſs, cough, Poitou, colic, and coſtiveneſs. Externally, boiled in milk, or roaſted, the fruit is applied in toothach, phlegmon, cynanche, bubo, and carbuncle.

DCCCXXXIX.

CLASS XXIV. CRYPTOGAMIA.

This claſs conſiſts of ſuch plants as conceal their fructification, having their flowers either within the fruit, or ſo ſmall as not to be perceptible to the naked eye. The fructification in theſe is alſo uncommon in its ſtructure. The orders of this claſs are four.

DCCCXL.

1. The firſt is the Filices or Ferns, comprehending ſuch plants as are dorſiferous. Of this order, the medical articles are:

DCCCXLI.

Fructificationes Spicatæ.

Equiſetum.

Spica ſparſ.; fruct. peltatæ, baſi valvulatæ.

Equiſetum Arvenſe (Corn Horſetail).

The plant is uſed, which is aſtringent and diuretic. It employed in gonorrhœa, in all paſſive diſcharges, in conſumption, and hematuria.

DCCCXLII.

Fructificationes frondosæ in pagina inferiore.

Pteris.

Linneæ marginis ad peripherium.

Pteris Aquilina (Female Fern).

The root is the part uſed, which is anthelminthic, and is given in powder to 1 ſcruple with honey.

DCCCXLIII.

Aſplenium.

Linneæ diſci ſubparallelæ, variæ.

Aſplenium Cataracb (Common Spleenwort).

This plant has a ſlightly auſtere mucilaginous taſte. It is uſed in cachexy.

All the other ſpecies of aſplenium poſſeſs the ſame qualities.

DCCCXLIV.

Polypodium.

Puncta diſci diſtincta.

Polypodium Vulgare (Common Polypody).

The ſoft root of this perennial plant, the part uſed, has a taſte ſweet, ſomewhat nauſeous, ending in a bitter. Its virtues are expectorant and eccoprotic.

DCCCXLV.

Polypodium Filix Mas (Male Fern).

The root, the part uſed, has a taſte diſagreeable, mucilaginous, and ſweet, with ſome ſtypticity, and towards the end becoming bitter. It is anthelminthic, lactiferous, and emmenagogue. It

is exhibited in tenia, lumbrici, and rickets. The dofe is 30 grains to 1 fcruple to children; and from 2 to 3 fcruples to adults.

DCCCXLVI.

Adianthum.

Maculæ apicum margine reflex, obtectæ.

Adianthum Capellus Venerea.

This plant is chiefly ufed in making capillaire fyrup.

DCCCXLVII.

2. The next order is the Mufci, or Moffes.

DCCCXLVIII.

Acalyptrati.

Lycopodium.

Anthera 2-valvis, feffilis.

Lycopodium Clavatum (Common Club Mofs).

The pollen, or flour, is ufed, which is of a dry quality, and employed in excoriations, and as a powder for covering medicines.

DCCCXLIX.

Lycopodium Selago (Fir Club Mofs).

Its qualities are drafltically cathartic, emmenagogue, and vermifuge. It is employed in dropfy, and againft vermine.

DCCCL.

3. The third order of this clafs is the Algæ, or Flags, which have their root, ftem, and leaf, all in one.

DCCCLI.

Terrestres.

Lichen.

Fr. receptaculo lævi nitido.

Lichen Aphthosus.

This plant is rank and mephitic. Its virtues are cathartic and anthelminthic. It is employed against worms and aphthæ. Its forms are the powder in doses of 12 grains, and also the decoction or infusion.

DCCCLII.

Lichen Caninus (Ground Liverwort).

This plant resembles the former in smell. Its virtues are alterative. It is employed in hydrophobia, mania, and convulsive asthma.

DCCCLIII.

Lichen Cocciferus (Cup Moss).

It grows at the roots of trees in pine woods. It possesses a taste slightly styptic; and is used in chincough.

DCCCLIV.

Lichen Islandicus (Iceland Liverwort).

It is bitter, somewhat astringent, and mucilaginous; but its bitterness is much destroyed by boiling. It is nutritive and eccoprotic, and employed in consumption, hemoptysis, and cough. Its proportions in decoction are half an ounce to 1 lb.

DCCCLV.

Lichen Plicatus.

This ſpecies is aſtringent, and uſed in hemorrhages.

DCCCLVI.

Lichen Pulmonarius.

This ſpecies has a bitter ſaltiſh taſte, and is given in cough and jaundice.

DCCCLVII.

Lichen Roccella.

This is alſo ſaltiſh, ſlightly acrid to the taſte, and of a red colour. It is uſed as a paint.

DCCCLVIII.

Aquaticæ.

Conferva.

A. capillaris.

Conferva Rivularis.

Its chief quality is, that it exhales, eſpecially in winter, a great quantity of oxygen gas.

DCCCLIX.

Conferva Helminthochorion.

This plant poſſeſſes a nauſeous ſaline taſte; and gives out, in decoction, a great quantity of mucilage. Its virtues are anthelminthic; and it is employed againſt lumbrici, in doſes from 10 grains to 1 ſcruple. The proportion of its decoctions are 1 ounce to 1 lb. of fluid.

DCCCLX.

Fucus.

A coriacea.

Fucus Veſiculoſus (Vegetable Ethiops).

The aſhes are uſed. Its virtues are ſaline and alkaline. Calcined, it is given in bronchocele, and ſcrofula. Its doſes are 1 ſcruple.

DCCCLXI.

4. The laſt order of this claſs are the Fungi, or Muſhrooms.

DCCCLXII.

Pileati.

Agaricus.

Pileus ſubtus lamellosus.

Agaricus Muſcarius.

This ſpecies is poiſonous. Its virtues are cathartic and ſudorific. It is given in epilepſy and palſy from retropelled diſeaſes. Externally, the powder is ſprinkled on malignant ulcers and gangrene. The doſe of the powder is from 10 to 30 grains in vinegar.

DCCCLXIII.

Boletus.

Pileus ſubtus poroſus.

Boletus Laricinus.

This ſpecies has a nauſeous bitteriſh taſte. Its virtue reſides in an acrid reſinous principle. It is draſtically cathartic and emetic. Externally, it is applied to hemorrhages and ulcers.

DCCCLXIV.

Boletus Igniarius.

This ſpecies mechanically ſtops the blood in hemorrhages.

DCCCLXV.

Boletus Suaveolens.

This ſpecies has a ſweet ſmell, and, when dried and beat in powder with a little alcohol, it is given in pulmonary conſumption and ſpaſmodic aſthma. The doſe is from half a dram to 2 drams.

DCCCLXVI.

Pileo deſtituti.

Peziza.

F. campanulatus.

Peziza Auricula.

This ſpecies is aſtringent, and uſed in the form of gargle and collyrium in angina and opthalmia.

DCCCLXVII.

Lycoperdon.

F. globoſus.

Lycoperdon Boriſta.

This plant is remarkably ſtyptic; hence it is aſtringent and obſtipating. It is exhibited in hemorrhages, piles, and ulcers.

DCCCLXIX.

Lycoperdon Tuber (Truffle).

This ſpecies has a goatiſh ſmell, is aphrodiſiac, and employed for domeſtic uſes.

DCCCLXX.

PALMÆ.

The laſt claſs, or rather an Appendix to his

Claſſification formed by Linnæus, is the Palmæ, or ſuch plants as have a ſpadix and ſpatha; the medical articles of which are:

DCCCLXXI.

Pennatifoliæ.

Phœnix.

Dioica. Drup 1 ſperma.

Phœnix Dactylifera (*Date Tree*).

The fruit of this tree has a ſweet mucilaginous taſte, and is nutritive and expectorant. It is employed in cough, hoarſeneſs, and ſtrangury.

DCCCLXXII.

Sagus (*Sago*).

Sagus Farinaria.

The flour of the pith is the part uſed. It is farinaceous, mucilaginous, and nutritive, and employed in conſumption and dyſentery.

DCCCLXXIII.

Coccos.

Coccos Butyracea } *Palm Oil.* }
Coccos Nucifera }

The fixed oil of the fruit is uſed. It poſſeſſes the ſame qualities as other fixed oils, and is employed in all cutaneous affections of inflammation or pain.

END OF THE FOURTH VOLUME.

tomy, with marginal Drawings, representing the various incisions practised by the most celebrated Operators. 4. Plain Rules for performing the Operation.

4. Observations on the MEDICAL and DOMESTIC MANANGEMENT of the CONSUMPTIVE; on the Powers of Digitalis Purpurea; and on the Cure of Scrophula. By THOMAS BEDDOES, M.D. Price 7s. in boards.

5. ESSAY on the CAUSES, EARLY SIGNS, and PREVENTION of PULMONARY CONSUMPTION. For the Use of Parents and Preceptors. The Second Edition, much enlarged. By T. BEDDOES, M.D. Price 6s. in boards.

6. CONTRIBUTIONS to the PHYSICAL and MEDICAL KNOWLEDGE, principally from the West of England. Collected by THOMAS BEDDOES, M.D. Price 8s. in boards.

7. MEDICINA NAUTICA; an Essay on the Diseases of Seamen; with an Appendix, containing Communications on the New Doctrine of Contagion and Yellow Fever by American Physicians; transmitted to the Admiralty by Sir John Temple, Baronet, his Majesty's Consul General. By THOMAS TROTTER, M.D. Member of the Royal Medical Society, Honorary Member of the Physical and other Literary Societies of Edinburgh, and Physician to the Fleet. Vol. II. Price 7s. in boards.

8. PRACTICAL OBSERVATIONS on the DISEASES of the ARMY in JAMAICA, as they occurred between the Years 1792 and 1797; on the Situation, Climate, and Diseases of that Island; and on the most probable Means of lessening Mortality among the Troops, and among Europeans in Tropical Climates. By W. LEMPRIERE, Apothecary to his Majesty's Forces. In two vols. octavo. Price 13s. in boards.

9. OBSERVATIONS on the CANCEROUS BREAST. Consisting chiefly of original correspond-

ence between the Author and Dr. Bailie, Mr. Cline, Dr. Babington, Mr. Abernethy, and Dr. Stokes. Published by permission of the Writers; with an Introductory Letter to Mr. Pitcairn, and a Letter from Mr. Blair. By JOSEPH ADAMS, M.D. of the Royal College of Physicians, and Physician in the Island of Madeira; Author of "OBSERVATIONS ON MORBID POISONS." In octavo. Price 3s. 6d. fewed.

10. The PHARMACOPŒIA; or, THE ROYAL COLLEGE OF PHYSICIANS OF LONDON, translated into English; with Notes, Indexes of new Names, Preparations, &c. &c.; by THOMAS HEALDE, M.D. F.R.S. Lumleyan Lecturer at the College of Physicians, and Senior Physician of the London Hospital. The eighth edition, revised and adapted to the improved edition of the College; with an Index, fhewing the general Doses of Medicines. By JOHN LATHAM, M.D. Fellow of the Royal College of Physicians, Physician to the Magdalen, and to St. Bartholomew's Hospital. Price 6s in boards.

11. LECTURES on DIET and REGIMEN; being a systematic Inquiry into the most rational Means of preserving Health and prolonging Life; together with Physiological and Chemical Explanations, calculated chiefly for the use of families, in order to banish the prevailing abuses and prejudices in Medicine. In one large volume, octavo. By A. F. M. WILLICH, M.D. The third edition, considerably enlarged and improved. Price 9s. in boards.

CONTENTS OF THE WORK:

Introduction, or a general view of the whole work, and its practical tendency — Chap. I. On the means of preserving Health and prolonging Life.—II. Of Air and Weather.—III. Of Cleanliness.— V. Of Dress.—V. Of Food, Drink, and Spices.—VI. Of Exercise and Rest.—VII. Of Sleeping and Waking.—VIII. Of Evacuations.—IX. Of the Affections and Passions of the Mind —X. Of the Organs of Sense.—XI. On the Treatment and Preservation of the Eyes.—Conclusion, recapitulating useful Precepts.

N. B.—Among a variety of new subjects, the present edition contains a concise investigation of the following, viz. Arrow Root—

Artichoke — Beet Root — Cow Pox — Consumption — Exercise — Game — Lobsters — Manna Grass — Metallic Tractors — Oil — Olives — Salt — Small Pox — Tamarinds — Vinegar, &c. &c.

To which is added, a Postcript, containing a series of queries, addressed to those patients who are anxious to give an accurate and satisfactory account of their disorders when consulting medical men.

12. A DESCRIPTION of the ARTERIES of the HUMAN BODY, reduced into the *Form of Tables*, by ADOLPHUS MURRAY, M. D. Professor of Anatomy and Surgery at Upsal. *Translated from the Latin*, under the inspection of JAMES MACARTNEY, Lecturer upon Comparative Anatomy and Physiology at St. Bartholomew's Hospital, &c. &c. In one volume, 8vo. Price 4s. in boards.

"Professor Murray has here presented us with an accurate, perspicuous, and comprehensive view of the arterial system, traced through all its ramifications, from the aorta to the extreme parts of the body. This excellent Compendium has afforded much assistance to our latest and best writers on the distributions of blood-vessels, but has certainly not been equalled by any similar work in the English language." *London Medical Review, May*, 1801.

13. ELEMENTS of CHEMISTRY and NATURAL HISTORY. To which is prefixed, The Philosophy of Chemistry, by A. F. FOURCROY; Fifth Edition, with Notes. By JOHN THOMSON, Surgeon, Edinburgh. In Three large Vols. Royal Octavo. Price 1l. 11s. 6d. in boards.

"This edition has a claim to our attention, on account of the notes which have been added by the editor; and which we have indeed perused with much pleasure. Mr. Thomson has not, like many editors, contented himself with giving the text of his author, with only a few superficial remarks; on the contrary, he has added many copious and valuable notes to each chapter, the selection and number of which discover much judgment, and considerable extent of chemical reading. By these notes, also, this edition has in a great measure been made to keep pace with the rapid progress of chemical science, since the publication of the original work. The notes of the animal kingdom, Part IV. are particularly instructive and interesting. The same may indeed be said nearly of the whole; and we have no doubt that this edition will be found highly useful to chemical students." *Monthly Review, Dec.* 1801.



Printed by A. Strahan,
Printers-Street, London.